April 3, 2020

U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742
Attn: Ms. Penelope Reddy

RE: Final 2018 Annual Operations, Maintenance, and Monitoring Report
Area of Contamination 50
Former Fort Devens Army Installation, Devens, MA
Contract No. W912WJ-18-C-0011

Dear Ms. Reddy,

KOMAN Government Solutions, LLC (KGS) is pleased to provide the Final *2018 Annual Operations, Maintenance, and Monitoring Report, Area of Contamination (AOC) 50, Former Fort Devens Army Installation in Devens, MA.* The report describes the work conducted in 2018 for the O&M program, the groundwater remediation and monitoring programs, and the maintenance of institutional controls at AOC 50.

Please contact me at (508) 219-6771 or jropp@komangs.com if you have any questions or require additional information.

Sincerely,
KOMAN Government Solutions, LLC

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FINAL

2018 ANNUAL OPERATIONS, MAINTENANCE, AND MONITORING REPORT

AREA OF CONTAMINATION 50

FORMER FORT DEVENS ARMY INSTALLATION

APRIL 2020

Prepared for:
U.S. Army Corps of Engineers
New England District
Concord, Massachusetts 01742

Prepared by:
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Contract No.: W912WJ-18-C-0011

NOTICE

The United States Department of Defense, Department of Army, funded wholly or in part the preparation of this document and work described herein under Contract No. W912WJ-18-C-0011. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

2018 ANNUAL

OPERATION & MAINTENANCE (O&M)

AND MONITORING REPORT

AREA OF CONTAMINATION 50

Devens, Massachusetts

April 2020

CERTIFICATION:

I hereby certify that the enclosed Report, shown and marked in this submittal, is that proposed to be incorporated with Contract Number W912WJ-18-C-0011. 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.

Reviewed By:

4/3/2020

KGS Project Manager **Date**

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ACRONYMS AND ABBREVIATIONS

ABC®	Anaerobic BioChem®
ABC® Ole’	Anaerobic BioChem® + Oleic Acid
ABC® Ole’+	Anaerobic BioChem® + Oleic Acid + Zero Valent Iron
amsl	above mean sea level
AOC	area of contamination
ARCADIS	ARCADIS U.S., Inc./G&M, Inc.
Army	U.S. Army
BCT	Base Realignment and Closure Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
°C	degrees Celsius
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cis-1,2-DCE	cis-1,2-dichloroethene
cm/s	centimeter per second
COC	contaminant of concern
CVOC	chlorinated volatile organic compound
CY	calendar year
1,2-DCA	1,2-dichloroethane
1,1-DCE	1,1-dichloroethene
1,2-DCP	1,2-dichloropropane
DO	dissolved oxygen
DoD	Department of Defense
DPT	direct push technology
DRFTA	Devens Reserve Forces Training Area
DTW	depth-to-water
ELAP	Environmental Laboratory Accreditation Program
ERD	enhanced reductive dechlorination
FDSA	Former Drum Storage Area
FID	flame ionization detector
ft	feet
ft/ft	feet/foot
ft/day	feet per day
HGL	HydroGeoLogic, Inc.
IDW	investigation-derived waste
IRZ	in-situ reactive zone
IWS	in-well stripping
J	estimated result
KGS	KOMAN Government Solutions, LLC
LTM	long-term monitoring
LTMMP	Long-Term Monitoring and Maintenance Plan
LUC	land-use control
MAAF	former Moore Army Airfield
MassDevelopment	Massachusetts Development and Finance Agency
MCL	Maximum Contaminant Level
mg/L	milligrams per liter

MiHPT	Membrane Interface Probe-Hydraulic Profiling Tool
mL/min	milliliters per minute
MS	matrix spike
MSD	matrix spike duplicate
mS/cm	millisiemens per centimeter
mV	millivolt
NAVD 88	North American Vertical Datum 1988
NELAP	National Environmental Laboratory Accreditation Program
O&M	operation and maintenance
ORP	oxidation-reduction potential
PARCCS	precision, accuracy, representativeness, comparability, completeness, and sensitivity
PCE	tetrachloroethene
PFAS	per- and polyfluoroalkyl substances
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QSM	Quality Systems Manual
RAWP	Remedial Action Work Plan
ROD	Record of Decision
Sovereign	Sovereign Consulting Inc.
TCE	trichloroethene
TOC	total organic carbon
trans-1,2-DCE	trans-1,2-dichloroethene
µg/L	micrograms per liter
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VC	vinyl chloride
VOC	volatile organic compound
Wt%	weight percent
ZVI	zero valent iron

1.0 INTRODUCTION

This 2018 Annual Operation & Maintenance (O&M) and Monitoring Report was prepared by KOMAN Government Solutions, LLC (KGS) for the U.S. Army Corps of Engineers (USACE) under contract number W912WJ-15-C-0002, to detail the operation and performance of on-going remediation activities and groundwater monitoring results at Area of Contamination (AOC) 50 at the former Fort Devens Army Installation (Devens), Devens, Massachusetts. Remediation activities were performed in accordance with the *Final Long-Term Monitoring and Maintenance Plan AOC 50* (LTMMP) [KGS, 2017] and the *Area of Contamination 50, 2018 Injection Program Summary* (KGS, 2018a).

In addition to reporting the 2018 long-term monitoring (LTM) data and in accordance with the *AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018b) and *Interim Update to AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018c), this 2018 Annual Report will present the results of baseline groundwater samples that were collected in January 2019 from two newly installed monitoring wells. The monitoring wells were installed to delineate/characterize the downgradient (Areas 4/5) western portion of the chlorinated ethene plume as well as to investigate the presence of per- and polyfluoroalkyl substances (PFAS) in this area. It should be noted that only the volatile organic compound (VOC) results will be documented in this report. The details regarding the PFAs investigation will be documented as part of the Area 3 PFAs remedial investigation.

1.1 Purpose and Objectives

The purpose of this Annual O&M and Monitoring Report is to document the O&M activities conducted at AOC 50 and to summarize the results of the LTM for groundwater conducted during 2018. The Annual Report for AOC 50 also includes information regarding remedial actions performed at the site. The Army conducted groundwater monitoring events during the spring and fall of 2018 and completed an enhanced reductive dechlorination (ERD) injection event from August to September 2018.

Additionally, this report will serve to document:

- validated results for vertical profile groundwater sampling;
- permanent monitoring well installation/construction details; and
- validated results for baseline groundwater samples collected from the newly installed wells.

The vertical profiling and monitoring well installation were completed in the fall 2018/winter 2019, respectively.

1.2 Site Description and History

The AOC 50 site is located on the northeastern boundary of the former Moore Army Airfield (MAAF), within the former North Post of the former Fort Devens Army Installation, in the town of Ayer, Massachusetts (**Figure 1-1**). 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 U.S. Army (Army) for reserve forces training and was renamed 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 U.S. Fish and Wildlife Service [USFWS]) for reuse and redevelopment. In 2009, the DRFTA was renamed the U.S. 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 dated 14 November 1994, Special Use II and Innovation and Technology Business includes a broad range of industrial, light industrial, office, and research and development uses. 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 nine acres of the former airfield for vehicle storage and maintenance and approximately four acres in and around the AOC 50 Source Area for remediation activities.

The primary area of groundwater contamination at AOC 50 is referred to as the Southwest Plume, which extends from the Source Area approximately 3,000 feet downgradient towards the Nashua River. Sources of groundwater contamination at AOC 50 include two World War II fueling systems, a drywell formerly connected to the parachute shakeout tower, and the tetrachloroethene (PCE) Former Drum Storage Area (FDSA); these sources are collectively referred to as the AOC 50 Source Area. The AOC 50 Source Area is comprised of less than two acres and surrounds Building 3803 (the former parachute shop), Building 3840 (the former parachute shakeout tower), Building 3824 (a gazebo), and Building 3801 (the former 10th Special Forces airplane parachute simulation building). Although these sources have been removed or taken out of commission, groundwater underlying AOC 50 contains elevated concentrations of VOCs, most notably PCE. The AOC 50 site layout with existing monitoring wells is depicted in **Figures 1-2** and **1-3.**

The *Final Record of Decision, AOC 50* (ARCADIS, 2004) identified the groundwater contaminants of concern (COCs) and their interim cleanup levels (**Table 1-1**).

Table 1-1
AOC 50 Cleanup Levels

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

Some of the contaminants were designated COCs because they were present at concentrations above the applicable U.S. Environmental Protection Agency (USEPA) maximum contaminant level (MCL) 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. 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.

The selected remedy for AOC 50, documented in the Record of Decision (ROD) (ARCADIS, 2004), was Alternative 6: Soil Vapor Extraction, ERD (with solubilized inorganic controls), In-Well Stripping/Aerobic Bioremediation, Monitoring, and Institutional Controls. In addition, geochemical additives and in-situ chemical oxidation were included as contingencies to address inorganics and volatile organic compounds, respectively if monitoring data indicate that implementation of these contingencies was warranted. It was estimated that ERD injections were expected to be phased out after approximately 10 to 15 years. As a result of performing ERD at this site, since 2004, the PCE plume has decreased in size (15.5 acres 2004 to 6.81 acres 2018), and concentration (maximum concentration 14,000 (micrograms per liter [µg/L]) to 370 µg/L. The need for additional treatment will be assessed further in 2019. Approximately 27 years were estimated as the amount of time necessary to achieve the goals consistent with unrestricted land use and potable use of groundwater for the entire site (ARCADIS, 2004).

Summary of Past Groundwater Treatment at AOC 50

In September 2004, ARCADIS U.S., Inc./G&M, Inc. (ARCADIS) implemented a full-scale remedial action at AOC 50 that included soil vapor extraction in the source area, ERD throughout the plume, and an in-well stripping (IWS) system downgradient of Area 5. The first ERD injection event was conducted in October 2004 utilizing molasses as the ERD substrate. ARCADIS discontinued the soil vapor extraction system in November 2005, as the monitoring program indicated that the recoverable mass of chlorinated volatile organic compounds (CVOCs) was removed from the vadose zone. The IWS was shut off in March 2013 once it was clear that it was not needed to treat dissolved arsenic or to "polish" the CVOC plume (Sovereign Consulting, Inc. [Sovereign], 2013).

HydroGeoLogic, Inc. (HGL) revised the ERD injection program in November 2008 by changing the substrate from molasses to a product called Anaerobic BioChem® (ABC®). Semi-annual injections of ABC® continued in Areas 1 through 5 of the AOC 50 plume through 2014.

Throughout most of the plume, CVOC concentrations were reduced substantially in response to the ERD injections. However, some areas did not respond as well to the remedy, so in 2013 and 2014, investigations were performed within the source area and at locations within the plume to support remedy optimization. In calendar year (CY) 2013, vertical profiling using direct push technology (DPT) probing was performed in the source area of AOC 50 ("Area 1") as well as in several of the other Areas of the plume (Sovereign, 2015). Based on the results of the vertical profiling in Area 1, a Membrane Interface Probe Hydraulic Profiling Tool (MiHPT) investigation was conducted in 2014 to further assess potential residual source(s). Specifically, the MiHPT investigation was intended to improve the overall understanding of the location/source of residual CVOC contamination both vertically and laterally in the saturated soils in the source area where elevated concentrations of PCE (over 1,000 micrograms per liter [µg/L]) remained, as well as to

better understand the relative permeability of those soils. Those data were used to recommend modifications of the existing remedy to more effectively treat the source area.

In 2015, the substrate injection strategy was optimized based on review of the historical data and MiHPT results (Sovereign, 2015). The 14th ERD injection event using ABC® was performed in July 2015. Modified substrates Anaerobic BioChem® + Oleic Acid (ABC® Ole') and Anaerobic BioChem® + Oleic Acid + Zero Valent Iron (ABC® Ole'+) were also added to the 14th event. ABC® Ole' includes oleic acids, which are long-chained compounds that persist for a longer period of time in the aquifer formation, and therefore may improve the effectiveness of the injections. ABC® Ole'+ includes the oleic acids plus zero valent iron (ZVI) which is intended to enhance the rate of degradation in the less permeable impacted source area soils and provide an abiotic (chemical) transformation mechanism for reductive dechlorination of chlorinated ethenes into harmless by products (e.g. ethene and acetylene). Substrate injections using ABC® Ole' were injected into existing injection wells in Areas 1, 2, and 3. ABC® was injected into existing injection wells in Areas 4 and 5. ABC® Ole'+ was directly injected using DPT via a Geoprobe® into targeted locations in Area 1.

The 15th ERD injection event was performed in July 2017. During this injection event, approximately 2,700 gallons of ABC® Ole' and approximately 31,825 gallons of ABC® Ole'+ were injected throughout the plume using injection wells and directly into soils using a Geoprobe®, respectively. The details of the 2017 injection event are presented in 2017 Annual Report (KGS, 2018d).

The 16th ERD injection event was performed from August to September 2018. During this injection event, the ERD substrate was a combination of ABC® Ole' and ABC® Ole'+. Permanent injection wells in Areas 3, 4, and 5 received ABC® Ole'. In order to treat contamination that was not readily affected by the existing permanent injection wells, ABC® Ole'+ was injected directly into saturated soils using a Geoprobe® in Areas 1, 3, and 5. The details of the 2018 injection event are presented in **Section 2.0** of this Annual Report.

1.3 Site Hydrogeology

A single 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 are not prevalent or continuous in soil borings conducted within the kame glacial deposit or along the Nashua River. Some silty clay layers were encountered within the aquifer in the AOC 50 Source Area. These thin, silty clay layers appear to reduce the vertical permeability and contribute to a slight increase in the water table elevation.

Depth to groundwater measurements have been collected from a network of monitoring wells and sampling points on a regular basis since 1997. In 2018, groundwater was encountered at approximately 10 feet below ground surface (bgs) in the AOC 50 Source Area and at approximately 60 feet bgs towards the southwestern end of the former MAAF. Groundwater elevations within deeper wells and to the north of AOC 50 typically have lower total heads than wells screened at shallower depths, indicating that there is a downward hydraulic gradient within this area.

The Nashua River is the controlling hydrologic feature of AOC 50 and the former MAAF area. As groundwater beneath AOC 50 moves downgradient in a southwesterly direction toward the Nashua River (**Figure 1-2**), vertical gradients become neutral. Along the Nashua River, vertical gradients

reverse and become upward, as would be expected near such a discharge feature. These changes in gradient indicate that groundwater is recharged near the AOC 50 Source Area, travels below the former MAAF, and discharges to the Nashua River.

Hydraulic conductivities at the site range from 1 to over 50 feet per day (ft/day), with seepage velocities ranging from 0.024 to 1.19 ft/day.

1.4 Remedial System Operations and Modifications

The overall O&M approach and remedial system configuration at AOC 50 is adjusted over time to achieve optimum remedial performance. During the 2018 reporting period, the Army conducted the following routine activities and modifications:

- Collected semi-annual water level measurements (spring and fall);
- Conducted semi-annual and annual LTM groundwater sampling events in April 2018 (spring) and October 2018 (fall).
- Sampled two new monitoring wells (G6M-18-01 and G6M-18-02) on January 14, 2019.

System modifications/updates performed during the 2018 reporting period included:

- Modified the ERD substrate injection strategy based on an evaluation of groundwater flow and VOC trends observed in groundwater;
- Performed ERD substrate injection event using 10 injection wells (IW) and 37 Geoprobe® direct push injection locations (GP) from August to September 2018.
- Performed vertical profile DPT groundwater sampling in October 2018 along the downgradient western portion of the PCE plume to further characterize the nature and extent of the plume;
- Installed two permanent overburden monitoring wells (G6M-18-01 and G6M-18-02) from January 8-9, 2019 along the downgradient western portion of the PCE plume based on the results of the vertical profiling sampling;
- Performed well development on the two new wells on January 10, 2019; and
- Updated elevation data (i.e., well screen, monitoring point) from North American Vertical Datum (NAVD) 1929 and/or feet above mean sea level (amsl) to NAVD 1988.

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2.0 REMEDIAL SYSTEM

The current remedial system consists of ERD. The IWS was turned off in March 2013 and is currently non-functional.

2.1 Enhanced Reductive Dechlorination (ERD) System

The 2018 ERD injections at AOC 50 were implemented by Redox Tech, LLC and monitored by KGS. The 2018 injection event occurred from August 14 to September 6, 2018 and was performed in accordance with *Area of Contamination 50, 2018 Injection Program Summary* (KGS, 2018a). ABC® Ole' was injected into permanently installed injection wells in Areas 3, Area 4, and Area 5 to increase persistence and prolong treatment of VOCs. ABC® Ole'+ was injected to enhance VOC reduction and stimulate long-term release of the components for bioremediation and create a more reductive environment. This combination was injected directly into saturated soils using a Geoprobe® unit in Areas 1, 3, and 5. A description of these two amendments is provided in Section 1.2. ABC® Ole'+ is not used in existing injection wells due to the potential to clog the well screens.

The 2018 injection strategy was adjusted based on the historical LTM data, the MiHPT results (Sovereign, 2015), and the 2017 ERD injection event. The strategy consisted of performing injections into existing injection wells and using direct push injections via a Geoprobe® to reach deeper impacted zones. The direct injections were conducted by directly injecting the ERD substrate through 1.5-inch diameter rods. Injections were performed at:

- five Area 1 direct push injection locations (GP-58 through GP-62) in the FDSA,
- 11 Area 1 direct push injection locations (GP-63 through GP-73) adjacent to Building 3803/3840,
- four Area 3 direct push injection locations (GP-74 through GP-77),
- three Area 3 injection wells (IW-25 through IW-27),
- four Area 4 injection wells (IW-29 through IW-32),
- three Area 5 injection wells (IW-6, IW-39, G6M-02-05X),
- and 17 direct push locations (GP-78 through GP-94) southwest of Area 5 injection wells.

An injection log provided in **Table 2-1** identifies each injection location (DPT injection point or existing injection well), quantity and type of injected product, and measured field parameters (i.e., flame ionization detection and photoionization detector measurements of headspace for the injection wells as indicators of biodegradation processes). Injection locations are presented on **Figure 2-1.**

2.1.1 Area 1

The Area 1 injection program consisted of direct injection locations at the FDSA and near Building 3803/3840. **Figure 2-1** shows the injections locations. A concentration of 15 weight percent (wt%) solution of ABC®-Ole'+ was directly injected into each of the locations in Area 1. At the 5 locations (GP-58 to GP-62) surrounding the FDSA, the planned injection interval ranged from 18 to 46 feet bgs. Of the 5 locations, only one location (GP-60) did not reach its intended target depth (46 feet bgs) due to refusal (encountered at 42 feet bgs) (**Table 2-1**). Total injection volumes

ranged from 450 to 890 gallons of ABC®-Ole'+ per point, totaling an estimated 3,660 gallons between the 5 locations.

At the 11 locations (GP-63 to GP-73) near Building 3803/3840, the planned injection interval ranged from 40 to 64 feet bgs. Of the 11 locations, six locations did not penetrate to the intended target depth due to refusal (encountered at depths ranging from 53 to 62 feet bgs). Total injection volumes ranged from 600 to 900 gallons of ABC®-Ole'+ per point, totaling an estimated 8,700 gallons between the 11 locations (**Table 2-1**).

In Area 1, the the target volume per location was approximately 860 gallons. However due to refusal and the dense formations encountered, the volume of substrate–originally planned for unachieved depths–was injected into the deepest interval successfully attained.

The locations where the planned injection depth was not achieved are in the western portion of the Area near G6M-13-05X (**Figure 2-1**). It is likely that the target depths were not achieved due to fine-grained sediments at depth. The Geoprobe® refusal depths of the seven locations were similar with the MiHPT Investigation (Sovereign, 2015), which encountered refusal depths ranging from approximately 47 feet to 65 feet bgs in the same area.

2.1.2 Area 3

The 2018 injections in Area 3 were conducted at three existing injection wells in Area 3 (IW-25 to IW-27) and four direct injection locations. The volume of ERD solution injected at existing Area 3 injection wells was approximately 450 gallons of the ABC® Ole' mixture at 20 wt% solution, totaling 1,350 gallons.

Four direct injections (GP-74 to GP-77) were conducted upgradient of G6M-04-02X, just east of Bldg. 3813 (**Figure 2-1**). A concentration of 20 wt% solution of ABC® Ole'+ was directly injected. The planned injection interval 75 to 95 feet bgs was reached at all four locations. Total injection volumes ranged from 720 to 840 gallons of ABC®-Ole'+ per point, totaling an estimated 3,130 gallons between the four locations (**Table 2-1**).

2.1.3 Area 4

The 2018 injections in Area 4 were conducted at four existing injection wells in Area 4 (IW-29, IW-30, IW-31, and IW-32). The volume of ERD solution injected at existing Area 4 injection wells was approximately 450 gallons of the ABC® Ole' mixture at 20 wt% solution, totaling 1,800 gallons. ZVI was not used in the existing injection wells due to potential for clogging of the well screens.

2.1.4 Area 5

The 2018 injections were conducted at three existing injection wells in Area 5 (IW-6, IW-39, and G6M-02-05X) and 17 direct injection locations southwest of Area 5 injection wells, upgradient of G6M-97-05B and upgradient of G6M-13-01X (GP-82 to GP-86). The volume of ERD solution injected at existing Area 5 injection wells was approximately 450 gallons of the ABC® Ole' mixture at 20 wt% solution, totaling 1,350 gallons. ZVI was not used in the existing injection wells due to potential for clogging of the well screens.

A concentration of 15 wt% solution of ABC® Ole'+ was directly injected. The planned injection interval 114 to 134 feet bgs was reached at all locations, with the exception of GP-90 (refusal

encountered at 130 feet bgs). Total injection volumes ranged from 260 to 750 gallons of ABC®-Ole'+ per point, totaling an estimated 9,910 gallons between the 17 locations (**Table 2-1**).

2.2 In-Well Stripping System

The Army operated the IWS system from 2004 to March 2013. Operation of the system was discontinued in 2013 with regulatory concurrence (Sovereign, 2013). In 2017, an assessment of the system was performed. Visual inspection of system components revealed corrosion of pumps and blowers. In order for the IWS system to be returned to full functionality, it is likely the central processing unit along with various pumps, blowers, and other system components will need to be replaced. At the Base Realignment and Closure Team (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.

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3.0 LONG-TERM MONITORING EVENT METHODOLOGY

The LTM program at AOC 50 was conducted in accordance with the *Final Long-Term Monitoring and Maintenance Plan, AOC 50* (KGS, 2017) to monitor COC trends over time in groundwater. Modifications have been made to the LTM monitoring network based on ongoing remedial actions and historical results. KGS performed semi-annual LTM groundwater sampling events in spring (April) and fall (October) 2018.

Additionally, groundwater samples were collected from two newly installed monitoring wells (G6M-18-01 and G6M-18-02) in January 2019 as part of an investigation to delineate/characterize the downgradient western portion of the PCE plume. The sampling methodology for these wells was similar to that used during LTM sampling events and will be discussed below.

The AOC 50 site layout, showing ERD injection well transects, LTM monitoring wells, and the two newly installed wells is depicted in **Figure 1-2**. The layout of the AOC 50 Source Area is presented in **Figure 1-3**. Completed groundwater low flow sampling forms for the 2018/winter 2019 events are presented in **Appendix A**.

3.1 Well Development

Two new monitoring wells (G6M-18-01 and G6M-18-02) were installed from January 8 through January 9, 2019 (**Figure 1-2**). Following installation, these two wells were developed on January 10, 2019 in accordance with the *AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018b). Well development forms are provided in **Appendix A**.

3.2 Groundwater Sampling and Analysis

The groundwater sampling events were performed in accordance with the low-flow procedures documented in *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* [U.S. Environmental Protection Agency (USEPA) Region 1, 2017], and included the following activities:

- A combination of dedicated and non-dedicated, stainless steel bladder pumps and peristaltic pumps were used for groundwater purging and sampling. The bladder pump intake screens were placed approximately in the center, or slightly below the center, of the submerged well screen interval. All pump intakes or tubing (if a peristaltic pump was used), were placed a minimum of 2 feet above the bottom of the monitoring wells.
- Previously installed, dedicated, dual bonded, ¼-inch diameter, Teflon-lined polyethylene sample tubing was used in each LTM well.
- Each monitoring well was purged at a rate between 100 and 500 milliliters per minute (mL/min). The purge rate was established to maintain a stable depth-to-water (DTW) and/or total drawdown less than 0.3 feet (about 3.6 inches).
- The pump discharge was field monitored for water quality parameters [pH, specific conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), temperature, and turbidity] using a YSI water quality instrument (model 556MPS) and in-line flow-through cell. The DTW was measured every five minutes during purging. The purging of the monitoring well was determined to be complete when water quality parameters stabilized.

- Turbidity samples were collected via a "Y" or "T" connector with a shut-off valve located after the pump, but before the flow-through cell. Samples were analyzed using either a Lamotte 2020we or Hach 2100Q meter(s).
- Dissolved metals samples were field-filtered using 0.45-micron filters.
- Investigation-derived waste (IDW) was handled following established procedures identified in the *2017 LTMMP* (KGS, 2017) at AOC 50.

Groundwater samples were collected from the monitoring wells for the analytical parameters discussed in **Section 4.0** of this report. Details on analytical sample container and preservation requirements are presented in **Table 3-1**.

3.3 Decontamination Procedures

Bladder pumps were decontaminated between wells by using the following five-step process: 1) rinse with potable water, 2) wash with a non-phosphate detergent solution, 3) rinse with potable water, 4) rinse again with isopropyl alcohol, and 5) rinse with distilled water. The bladder pumps were disassembled prior to decontamination. The single use bladder was also removed from the bladder pump and replaced during the decontamination process. The same five-step process was used to decontaminate other non-dedicated sampling equipment.

3.4 Investigative-Derived Waste Handling

Investigative-derived waste (i.e., low-flow purge water and decontamination water) was containerized at each wellhead during groundwater sampling events. Purge water from monitoring wells was discharged back to the ground at the site of generation after sampling was completed, as per the *2017 LTMMP* (KGS, 2017).

3.5 Long-term Monitoring Events

A summary of the methodology used during the 2018 sampling events is outlined below.

3.5.1 Monitoring Well Inspection

Prior to 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 noted; and,
- The monitoring well gripper seal was removed, and the wellhead was allowed to vent prior to well inspection.

No tampering of the wells was apparent during the 2018 sampling events. Several wells had missing protective casing locks that will be replaced in 2019.

3.5.2 Groundwater Level Measurements

The depth to water in the AOC 50 monitoring wells was measured with a water level indicator and recorded within a 24-hour period as part of the spring and fall LTM events. A summary of the groundwater level measurements and the corresponding groundwater elevation data is presented

in **Table 3-2** for the spring event, and **Table 3-3** for the fall event. Groundwater elevation contours are presented in **Figure 3-1** (April 2018) and **Figure 3-2** (October 2018).

Consistent with previous LTM events, the groundwater flow direction was observed to be toward the southwest during the spring and fall sampling events. In general, groundwater elevations were higher in the fall compared to the spring. Groundwater was encountered at approximately 9 to 11 feet bgs in Area 1 (at wells G6M-04-10X/A) and approximately 52 to 54 feet bgs at the southwestern end of the former MAAF (at well G6M-04-05X).

The groundwater hydraulic gradient between Area 1 well G6M-04-10A and downgradient well G6M-04-05X (southeast edge of plume) was calculated to be 0.0031 feet/foot (ft/ft) in April 2018 and 0.0028 ft/ft in October 2018. In general, the horizontal hydraulic gradient is steeper between Area 1 and Area 3, and downgradient of Area 3, the hydraulic gradient decreases.

3.6 Well Maintenance Activities

No maintenance activities were performed in 2018. Wells that have been documented as needing a lock will have the locks replaced in spring 2019 (**Appendix A**).

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4.0 GROUNDWATER MONITORING RESULTS

Sampling was conducted for the continued monitoring of chemical and geochemical parameters in AOC 50 groundwater in accordance with the 2017 LTMMP (KGS, 2017). Laboratory analytical results for the groundwater samples collected during LTM events in the spring (April) and fall (October) 2018 are discussed in the following subsections.

A separate discussion regarding the results of the vertical profile sampling (October 2018) along with the baseline groundwater sample results collected from the newly installed wells (January 2019) will be provided in Section 4.2.

The laboratory analytical reports for the 2018/2019 sampling events are in **Appendix B**. Analytical results judged to be contaminants originating in the sampling and analytical processes are not considered representative of site conditions. 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 data validation reports for the 2018/2019 sampling events (**Appendix C**).

4.1 Groundwater Chemistry for Monitoring Events

The spring 2018 LTM event included the sampling of 10 wells. The fall 2018 LTM event included the sampling of 45 wells. The winter 2019 baseline event included the sampling of two wells.

The frequency, sampling locations, and analytical parameters for the two LTM sampling events conducted in 2018, as well as the baseline results for the new monitoring wells are summarized in **Table 4-1**. The spring and fall 2018 LTM analytical results and field parameters are presented in **Tables 4-2** and **4-3**, respectively. The fall 2018 vertical profile and winter 2019 baseline analytical results are presented in **Tables 4-4** and **4-5**, respectively. Historical laboratory analytical results and groundwater field parameters, including the 2018/2019 sampling results, are presented in **Appendix D.**

4.1.1 Field Parameters

Field groundwater quality measurements collected during the 2018 LTM sampling events are summarized below.

Measured pH levels in groundwater ranged from 5.91 to 7.16 in April 2018 and from 4.99 to 9.82 in October 2018, which are suitable to support the ERD process.

The wells with lower pH were present within and downgradient of in-situ reactive zones (IRZ), especially in the FDSA/Area 1 and Building 3803/3840/Area 1. IRZs are formed as a result of the ERD treatment, the placement of which is shown in **Figure 2-1**. Reduced pH is expected due to ERD treatment; pH reduction occurs due to generation of carbonic and supplementary acid (e.g., fatty acids, propionic acid) from organic carbon fermentation that occurs in the ERD processes. The pH result of 9.82 was measured at XSA-12-97X. It is not known what caused an increase in pH; however, it may correlate to the lowest recorded ORP value (-283 millivolts [mV]) measured since this well has been sampled. pH will continue to be evaluated in order to optimize the injection program.

In general, low DO levels and negative ORP values were recorded downgradient and within the IRZs formed as a result of the ERD treatment. Low DO [less than 1 milligram per liter (mg/L)] and negative ORP values (reducing conditions) are indicators of the anaerobic breakdown of

CVOCs. Aerobic conditions, however, are present throughout most of Area 1 and Area 1/FDSA as evidenced by positive ORP measurements ranging from 14.3 millivolts (mV) to 246.1 mV. Monitoring wells that were targeted for treatment (G6M-13-05X and G6M-07-02X) did have DO below 1 mg/L; however, like most other wells within Area 1, these two wells had positive ORP measurements of 87.2 mV and 44.9 mV, respectively. Reducing conditions as measured by DO (less than 1 mg/L) and ORP (negative value) were recorded at wells G6M-04-10A and G6M-13-06X.

In Area 2, reducing conditions persist at G6M-04-03X, G6M-04-01X, and G6M-02-01X as documented by negative ORP measurements ranging from -73.1 to -115.8 mV in 2018. In Area 3, reducing conditions persist at G6M-03-07X and G6M-04-04X in 2018. Within the small portion of the plume remaining at Area 3 (G6M-04-02X), conditions returned to anaerobic in 2018 after aerobic conditions were observed in 2017. There was very little change in ORP between the spring (April) and fall (October 2018) sampling rounds after the ERD injections in August/September 2018. The flame ionization detector measurements from the headspace of the Area 3 injection wells measured prior to the injections (**Table 2-1**) indicate the presence of organic compounds in the air (including methane), which is a result of anaerobic biodegradation.

Anaerobic conditions persist in most of Areas 4 and 5 where ERD injections have occurred in the eastern portion of the plume. Anaerobic biodegradation occurring in this area is evident by the high flame ionization detector (FID) results from headspace monitoring of the Area 5 injection wells (**Table 2-1**). The FID results are indicative of methane produced from fermentation of the injected substrate. Within the western portion of the plume in Areas 4 and 5, the DO (less than 1 mg/L) and negative ORP are indicating that the aquifer is reducing. This may be the result of upgradient injections (previous, and/or current) which may be starting to impact the groundwater chemistry. The fall ORP at monitoring well G6M-13-01X was negative, which is the first time a negative ORP has been recorded at this well. This may indicate that upgradient injections are beginning to influence the groundwater chemistry in this area. The DO (greater than 1 mg/L) and ORP (positive value) at monitoring well G6M-97-05B indicate that this well has not been influenced by upgradient injections. Given, the suspected lower conductivity at this well (10^{-3} to 10^{-4} centimeters per second [cm/s]), this well will need to be monitored overtime to determine any effects. In the most downgradient portion of the plume, an area of low DO but with reducing conditions inconsistently present exists. DO and ORP trend graphs for select locations are presented on **Figure 4-1**. The dates of 2018 injections were added to trend graphs for locations that were directly affected by the 2018 injections.

Specific conductivity data above 2.0 milliseimens per centimeter (mS/cm) were generally recorded for groundwater in wells southwest of Route 2A, in the gravel parking lot for Area 1, and in Area 2 and 3 paved areas, which may be the result of the introduction of de-icing salt applied to roadways during snow removal activities.

4.1.2 Volatile Organic Compounds

Groundwater samples were collected from 10 monitoring wells during the spring 2018 sampling event and 45 monitoring wells during the fall 2018 sampling event and submitted for VOC analyses. **Figures 4-2** through **4-5** present PCE concentration contours over time and demonstrate continued reduction of PCE in AOC 50 groundwater. However, it should be noted that the interpretation of plume contours is affected by the distribution of data used to construct the contours, which changes over time, specifically the monitoring well network has changed from

2004 (**Figure 4-2**) to 2018 (**Figure 4-5**). The remediation of the groundwater plume at AOC 50 will continue to be monitored over time to verify that remedial goals are being achieved across the site.

Figure 4-2 shows a continuous PCE plume across AOC 50 in 2004, extending from the AOC 50 Source Area to downgradient Area 5, with the highest detected PCE concentrations, up to 17,000 µg/L at location G6M-94-18X, in the AOC 50 Source Area. These data were collected prior to full-scale remedy implementation. Location G6M-94-18X has since been converted to an injection well (IW-38).

Figure 4-3 shows PCE concentrations in 2010, after six years of the remedial action. The PCE plume decreased substantially over all areas at AOC 50, and was no longer continuous over the area. Residual pockets of PCE levels remained around the ERD injection transects. The highest concentrations continued to be present at the AOC 50 Source Area, with PCE detected at 1,000 µg/L at location G6M-04-09X.

Figure 4-4 shows PCE concentrations from the fall 2015 LTM sampling event. These samples were collected following an ERD injection in July 2015. The PCE concentrations continued to be highest in the AOC 50 Source Area with a maximum of 1,120 µg/L at location G6M-13-05X. PCE concentrations in Areas 2 and 3 continued to decrease. The PCE concentrations, west of the Areas 4 and 5 injection well transects, were the highest in well G6M-97-05B (117 µg/L).

Figure 4-5 shows PCE concentrations from the fall 2018 LTM sampling event. The plume contours are based on the 2018 data (i.e. concentrations, groundwater flow patterns). The PCE concentrations are also shown in cross-sections (**Figures 4-6, 4-7, 4-8, 4-9,** and **4-10**). The cross-sections also show vertical profiling results from 2013; the profiling results are for informational purposes only and were not directly used in contouring 2018 PCE concentrations.

- PCE has not been detected, and/or has been consistently detected below the MCL (5 µg/L), in most source area (Area 1) wells. At G6M-13-05X, prior to the 2018 August/September injection event, the spring 2018 concentrations were 59 µg/L-PCE, 81 µg/L-TCE, and 410 µg/L-cis-1,2-DCE. Following the 2018 August/September injection event, PCE was not-detected, and concentrations of TCE and cis-1,2-DCE decreased to 2.7 J and 250 µg/L, respectively, in fall (October) 2018. This is the first time since sampling was initiated at this location in 2014, that PCE was not detected and below the MCL (5 µg/L) (**Appendix D**). The non-detect result, coupled with the decreases in TCE along with cis-1,2-DCE and vinyl chloride generation, suggest that reductive dechlorination is continuing at this location as a result of previous injection events as well as the 2018 August/September injection event. Additionally, ethene and ethane were detected at the highest concentrations in this well (when analyzed for) indicating that late stage dechlorination is occurring. The concentrations will be monitored in spring 2019 to assess if these reductions are sustained or if there is rebound.
- PCE concentrations continue to be the highest in Area 1 at location G6M-07-02X. Although the PCE concentration remained similar between April 2018 (350 µg/L) to October 2018 (370 µg/L) at G6M-07-02X, the fall 2018 PCE result for this well (370 µg/L [430 µg/L]- duplicate) is lower than the fall 2017 concentration (910 J µg/L) (**Figure 4-11**). Additionally, an increase in daughter products (cis-1,2-DCE and VC), as well as the continued generation of ethane/ethene (since 2017) is indicative that biodegradation is occurring within this area as a result of ERD injections. The geochemical conditions are

suitable for sustaining reductive dechlorination (elevated methane, and total organic carbon [TOC] [refer to Section 4.1.4]) and concentrations should be re-assessed in spring 2019.

- PCE concentrations in Area 2, both upgradient and downgradient of the injection wells remained non-detect in 2018 (**Figure 4-12**).
- In Area 3, PCE concentrations at G6M-04-02X decreased from 300 µg/L (April 2018) to 200 µg/L [250 µg/L - duplicate] (October 2018) after the August/September 2018 ERD injections conducted upgradient of G6M-04-02X. These concentrations however are still within the historical (post-2008) fluctuation for this well. As shown on **Figure 4-13**, although there has been a substantial decrease in PCE mass between 2004-2008, PCE concentrations continue to fluctuate. G6M-04-02X is located approximately 50-feet upgradient of the Area 3 injection well transect, and approximately 80 feet downgradient of the four DPT injections (GP-74 through GP-77). The chemistry of the groundwater is indicative of anaerobic conditions, which are suitable for ERD; however the lack of an electron donor may explain the lack of enhanced dechlorination. Possible explanations for the lack of carbon substrate in the vicinity of G6M-04-02X may be (1) the electron donors (i.e., available hydrogen) may be actively consumed faster than groundwater velocity rate transporting the carbon substrate to the well; and/or (2) the upgradient injection locations were not hydraulically connected to this well. Additionally given the suspected lower permeability in soils near this well, untreated contaminants within the soil matrix may be back diffusing out into the groundwater as a result of changes in upgradient concentration gradients which might explain the fluctuating PCE concentrations at this well. PCE concentrations remain non-detect in monitoring wells downgradient of the injection wells (**Figure 4-13**).
- Downgradient of most of the Area 4 and Area 5 injection wells, specifically at G6M-02-13X, MW-7, MW-3, G6M-02-11X, G6M-13-01X, G6M-13-04X, G6M-03-10X, G6M-02-12X, G6M-04-05X, G6M-03-08X, G6M-04-06X, G6M-02-06X, and G6M-02-07X, the PCE concentrations were non-detect or below the 5 µg/L cleanup goal in 2018. It should be noted that the 2018 August/September ERD injections were conducted to specifically target G6M-13-04X as PCE concentrations have fluctuated from non-detect to 40 µg/L since 2014 (**Figure 4-14**). The spring (pre-injection) and fall 2018 (post-injection) were non-detect. Despite the lack of electron donor, late-stage dechlorination is occurring as evident by parent compound decreases, and continued generation of ethene/ethane (refer to **Appendix D**). Upgradient of Area 4 injection wells, PCE was non-detect in wells G6M-02-03X, G6M-97-28X, and G6M-02-04X in 2018.
- West of the Areas 4 and 5 injection wells, the plume has not changed significantly from 2017 and PCE concentrations continue to persist at low levels. The PCE concentrations at G6M-13-02X decreased in 2018 from 65 µg/L (October 2017) to 58 µg/L (April 2018) and then to 28 µg/L (October 2018) (**Figure 4-14**). The fall 2018 PCE concentration is the lowest recorded in the sampling history for this well. Geochemical conditions were further enhanced (increases in methane and TOC) at G6M-13-02X, suggesting that the upgradient August/September 2018 ERD injections were the cause for the decrease.
- The highest PCE concentrations in Area 4/5 at G6M-97-05B increased slightly from October 2017 (140 µg/L) to April 2018 (240 µg/L) and then decreased in October 2018 (190 µg/L). These concentrations are within the historical fluctuation for this well;

however, overall, concentrations appear to be increasing. DPT injections were performed upgradient of this well. The fall 2018 methane concentration (530 J µg/L) is the highest in the sampling history for this well, which could be an indication that upgradient injections are slowly creating an increasingly reducing environment, which is conducive for reductive dechlorination. The lack of an electron donor may explain the absence of enhanced dechlorination. Possible explanations for the lack of carbon substrate in the vicinity of G6M-97-05B may be (1) the electron donor (i.e., available hydrogen) may be actively consumed faster than groundwater velocity and/or (2) the upgradient injection locations were not hydraulically connected to this well. The spring 2019 data will need to be assessed to evaluate future remedial actions.

- There were decreases in PCE concentrations at G6M-04-07X from 38 µg/L (October 2017) to 15 µg/L (October 2018) however these concentrations are within the normal range of fluctuation for this well. PCE remains below the cleanup goal (5 µg/L) at well G6M-04-06X since 2010.
- The PCE concentration at XSA12-95X decreased from 36 µg/L (October 2017) to its lowest recorded concentration at this well location (13 µg/L; October 2018).

There are some remaining areas where TCE concentrations are above the MCL. All of the areas with TCE above the MCL are areas where PCE is currently or previously above the MCL.

- In Area 1, TCE concentrations have decreased to below the MCL (5 µg/L) at G6M-13-05X [2.7 J (estimated result) µg/L in October 2018, following the August/September 2018 ERD injection event compared to April 2018 (81 µg/L). As previously stated, the non-detect result for PCE, coupled with decreases in cis-1,2-DCE, generation of VC, and increases of ethane/ethene suggest that reductive dechlorination is continuing here as a result of previous injection events as well as the 2018 August/September injection event.
- In Area 3, TCE is present above the MCL at G6M-04-02X (64 µg/L [72 µg/L – duplicate] , October 2018).
- Downgradient of the Area 4 injection wells at G6M-02-13X, TCE concentrations have decreased to below the MCL (5 µg/L) from 21 µg/L (October 2017) to non-detect (October 2018). The August/September 2018 upgradient injections into wells IW-29 thru IW-32 have created reducing conditions necessary to facilitate reductive dechlorination as evidenced by a methane concentration of 5,900 µg/L. Concentrations of cis-1,2-DCE and VC have decreased as well, an indication that degradation of chlorinated ethenes may be near completion at this location. Further downgradient along the eastern, western, and southern portions of the PCE plume, TCE is mostly non-detect.
- TCE is also present above the MCL in wells west of the Areas 4 and 5 injection wells, co-located with elevated PCE concentrations, specifically at G6M-13-02X, G6M-13-04X, G6M-97-05B, XSA-12-96X, and G6M-04-07X. TCE was detected right at the MCL in XSA-12-95X.

4.1.3 Inorganic Metals

Groundwater samples were collected from 10 wells during the spring 2018 sampling event and from 45 wells during the fall 2018 sampling event. The samples were submitted for dissolved metals (arsenic, iron, and manganese) analysis. Metals analysis was not performed at the following

well locations per the 2017 LTMMP (KGS, 2017); G6M-04-05X, G6M-04-10X, G6M-04-13X, G6M-13-03X, and G6M-95-19X.

Metals solubilization associated with the ERD process, particularly arsenic and manganese which are mobilized under reducing groundwater conditions, appears to be occurring within the IRZs across AOC 50. The resulting desorption of naturally occurring metals from aquifer soils is directly correlated with the geochemically reducing conditions within the IRZ for each injection area. This relationship is observed throughout the AOC 50 treatment area and was an expected by-product of the selected remedial action.

The dissolved metals concentrations will likely continue to fluctuate within an IRZ and are not anticipated to significantly diminish until the IRZ reverts to an oxidizing state. As the aquifer becomes oxic (i.e., has a positive ORP), the geochemical conditions will promote the oxidation and precipitation of the dissolved metals. Metal hydroxides form and precipitate out of solution; in such areas, dissolved arsenic sorbs to metal hydroxides and is immobilized.

Areas with dissolved arsenic concentrations above the MCL of 10 ug/L are primarily in areas where ERD injections have occurred and downgradient of ERD injection areas, specifically in Areas 1, 2, 3, and in the eastern portion of Areas 4 and 5. During the 2018 monitoring events, the maximum concentration of dissolved arsenic detected was 820 µg/L at G6M-04-22X (Area 1) in October 2018, which is less than the October 2017 concentration (970 µg/L). This decrease in concentration may be the result of less reducing conditions at this well as documented by an ORP of 49.6 mV.

In wells where conditions are primarily oxidizing, the dissolved arsenic concentrations are generally non-detect or below the regulatory criterion of 10 µg/L. These areas include areas upgradient or cross-gradient of areas where injections were conducted (Area 1 – G6M-04-11X, Area 4 - G6M-02-03X). Dissolved arsenic concentrations for the 2018 sampling events are presented in **Figure 4-15**. This includes wells downgradient of the Area 5 injection wells, specifically G6M-04-06X and G6M-02-06X. Groundwater monitoring performed at the Area 5 downgradient well locations, XSA-12-97X, XSA-12-96X, XSA-12-98X, and XSA-12-95X indicates dissolved arsenic concentrations in groundwater close to the Nashua River are below the regulatory limit of 10 µg/L. Also, groundwater monitoring performed at the Area 5 downgradient well locations, G6M-02-06X and G6M-02-07X, indicates dissolved arsenic concentrations in shallow groundwater close to the Nashua River are below the regulatory limit of 10 µg/L. Downgradient of the Area 5 IRZ, the proximity of wells with elevated arsenic to wells with low arsenic can be explained by the observed changes in the redox conditions in those wells. For example, the elevated arsenic in well G6M-02-12X (590 µg/L) corresponds with the reducing conditions observed in that well (DO of 0.49 mg/L and ORP of -16.1 mV; see **Table 4-3**) whereas the rapid change to oxidizing conditions (DO of 1.69 mg/L and ORP of 30.9 mV) in well G6M-03-08X, located approximately 100 feet downgradient, had a substantially lower dissolved arsenic concentration (8.6 µg/L). G6M-02-12X is screened at a higher elevation (137.6-127.6 NAVD) compared to G6M-03-08X (131.4-116.4 NAVD). The distance from injections as well as the different screen intervals could explain the significant decrease in arsenic concentrations between these two wells.

With the exception of G6M-13-05X and G6M-95-20X, fall 2018 arsenic concentrations were lower than fall 2017 concentrations in Area 1 at the following wells; G6M-02-08X, G6M-04-09X, G6M-04-10A, G6M-04-15X, G6M-04-22, G6M-04-31X, G6M-07-02X, and G6M-13-06X.

Arsenic concentrations in wells in the western plume by Areas 4 and 5 (G6M-13-02X and G6M-97-05), which have not been affected by injections, continue to be below 10 µg/L. The arsenic concentration in well G6M-13-01X increased in concentration from 10 µg/L (October 2017) to 13 µg/L (October 2017) which could be the result of the reducing conditions created by the upgradient August/September 2018 injections.

Dissolved arsenic concentrations are variable, but as injections are ceased in areas where plume CVOC concentrations have decreased below cleanup levels (e.g., Area 2 and the eastern portions of Areas 4 and 5), dissolved arsenic concentrations are expected to decrease as these areas begin to return to aerobic conditions.

4.1.4 Other Analytes

Groundwater samples were submitted for analysis of dissolved gases (methane, ethene, and ethane), TOC, alkalinity, nitrate, sulfide, and sulfate from eight wells during the spring 2018 event, and from 15 wells during the fall 2018 event. These general chemistry parameters can be used to document the geochemistry of the aquifer, which can then be used to interpret whether conditions are suitable for reductive dechlorination and/or if it is occurring. For instance, methane concentrations greater than 500 µg/L are indicative of favorable reducing conditions [Environmental Security Technology Certification Program (ESTCP), 2004]; the presence of ethene/ethane are indicative of late-stage dechlorination of chlorinated ethenes; 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. An ideal range of TOC to support ERD is 20 to 50 mg/L (ESTCP, 2004). Alkalinity is measured to determine the buffering capacity of the aquifer; nitrate and sulfate are terminal electron acceptors. These should be depleted in order for late-stage dechlorination to occur; and sulfide is monitored as it is an indicator of sulfate reduction. Also, sulfide present in the aquifer can bind with metals (e.g., iron) to form iron-sulfides that have reactive surfaces similar to ZVI that can dechlorinate chlorinated ethenes through abiotic transformation. This is a beneficial side effect of the ERD process where abiotic reductive dechlorination has been observed to continue to remediate sites even after ERD rates decline. No direct measurements of abiotic degradation have been performed at AOC 50 to evaluate the extent of this degradation process.

- The highest methane concentration was 38,000 µg/L in groundwater sampled from monitoring well G6M-02-08X (Area 1, October 2018) (**Figure 4-16**).
- The highest ethane concentration was 14 µg/L in groundwater sampled from G6M-07-02X (Area 1) in October 2018.
- The highest ethene concentration was 43 µg/L in groundwater sampled from G6M-07-02X (Area 1) in May 2017.
- The highest TOC concentration was 1,300 mg/L in groundwater sampled from G6M-07-02X (Area 1) in October 2018.

In Area 1, the high methane concentrations at G6M-04-10A (25,000 µg/L in April 2018, 32,000 µg/L in October 2018), G6M-02-08X (38,000 µg/L in October 2018), and G6M-13-06X (17,000 µg/L in October 2018) indicate favorable (i.e., anaerobic) conditions for biodegradation at these locations. TOC concentrations at these locations are above 20 mg/L indicating sufficient carbon is available for the biodegradation process.

There was a substantial increase in TOC concentrations at G6M-07-02X from 580 mg/L (April 2018) to 1,300 mg/L (October 2018) following the August/September 2018 injections. A significant increase in methane from 1,200 µg/L to 25,000 µg/L occurred at G6M-07-02X from October 2017 to October 2018. Significant increases in TOC concentrations at G6M-13-05X from 85 mg/L (April 2018) to 210 mg/L (October 2018) occurred following the August/September 2018 injections. A significant increase in methane from 6,800 µg/L to 16,000 µg/L occurred at G6M-13-05X from April 2018 to October 2018. The increases in TOC and methane at both locations appear to correlate with the injection event. The current geochemical conditions support continued biodegradation in this area.

Methane or TOC were not evaluated in Area 2 in 2018 per the 2017 LTMMP (KGS, 2017). There were no injections performed in 2018 as concentrations of CVOCs have been below the ROD cleanup goals since at least 2016.

Methane concentrations in Area 3 wells remained elevated in 2018 ranging from 14,000 to 37,000 µg/L indicating there are reducing conditions present, which can support biodegradation in this area. The TOC concentrations range from 8.4 µg/L to 18 mg/L which are below the ideal TOC range (20 mg/L) in this area to support the biodegradation process.

TOC concentrations in Area 4 were low and methane concentrations were low-to-moderate, suggesting there is minimal anaerobic biodegradation occurring due to a lack of carbon available for the biodegradation process. Most of the locations in Area 4 had PCE concentrations that decreased to below the cleanup level, except at G6M-13-02X where residual PCE concentrations remain. The August/September 2018 injections were conducted approximately 225 feet upgradient of G6M-13-02X. Methane concentrations increased slightly from April 2018 (6,300 µg/L) to October 2018 (6,700 µg/L) and TOC concentrations increased from April 2018 (6.8 mg/L) to October 2018 (29 J mg/L) following the August/September 2018 injection event. This is the first time in this well's sampling history where TOC has been above the recommended 20 mg/L needed to support reductive dechlorination. The decreases in PCE concentrations, previously described are most likely due to this, and will continue to be further assessed through additional sampling.

Currently the portions of the plume in Area 5 with the highest PCE concentrations have low TOC concentrations, where analyzed. Some of these locations have elevated, but not very high, concentrations of methane indicating that the injections may be causing biodegradation upgradient of those areas. The well containing the highest PCE concentration (190 µg/L) in this area in October 2018 was G6M-97-05B. This well had a very low methane concentration (530 J µg/L) and was non-detect for TOC. However, the fall 2018 methane concentration was the highest recorded for this well and could be an indication that the upgradient August/September 2018 injections may be starting to create increasingly reduced conditions. Methane, TOC, and CVOCs will continue to be monitored to assess biodegradation in these areas.

4.1.5 Data Evaluation Summary

Overall, PCE concentrations in groundwater continue to decrease due to the ERD treatment. As shown in **Figure 4-5**, residual pockets of PCE in groundwater remain in Area 1 (FDSA), in Area 3, and along the western edge of Areas 4 and 5. The PCE concentrations in the Area 5 downgradient locations, XSA-12-97X, XSA-12-96X, XSA-12-95X, and G6M-04-07X remain above the 5 µg/L action level for PCE.

The maximum observed PCE concentration across AOC 50 has decreased from October 2017 (910 J µg/L) to April 2018 (370 µg/L in Area 1, G6M-07-02X). After the August/September 2018 injections, PCE and methane concentrations in well G6M-07-02X remained at similar concentrations (370 µg/L and 25,000 µg/L, respectively), however the TOC concentration increased to 6,100 mg/L, suggesting that this well was influenced post-injection. The methane concentration indicates that reducing conditions exist, and the TOC concentrations indicate that there is ample electron donor necessary to facilitate reductive dechlorination. Although, the PCE concentration did not decrease between sampling events, reductive dechlorination is occurring as evidenced by the increase in cis-1,2-DCE and the generation of late-stage dechlorination products, ethene and ethane. The spring 2019 data will be assessed to determine whether further decreases of the parent compound (PCE) are occurring.

In wells where conditions are primarily oxidizing, the dissolved arsenic concentrations are generally below the regulatory criterion of 10 µg/L. This includes shallow wells downgradient of the Area 5 IRZ. Deeper groundwater downgradient of the Area 5 IRZ does have arsenic concentrations above the regulatory limit, but concentrations are beginning to decrease in some of the monitoring wells, indicating geochemistry in the deeper portion of the aquifer is beginning to return to aerobic conditions.

TOC concentrations increased in specific areas as a result of the 2018 injections.

The presence of methane in groundwater in the injection areas indicates fermentation is occurring in a highly anaerobic environment and favorable reducing conditions are present. Methane concentrations greater than 500 µg/L were measured in portions of the Source Area, Area 3, Area 4, and downgradient of the Area 5 injection wells. Areas outside of the injection areas have lower concentrations of methane indicating less fermentation is occurring in those areas. CVOCs are expected to decrease as biodegradation takes place in the areas around and downgradient of the injection points.

4.2 Downgradient Western Plume Delineation

In October 2018, vertical profile groundwater sampling was performed in accordance with *AOC 50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018b) and *Interim Update to AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018c). These investigations were initiated in Area 4/5 to provide information regarding the horizontal and vertical extent of PCE contamination (if any) in order to install permanent monitoring wells in these locations. The ultimate goal of these investigations was to delineate the western edge of the PCE plume in this area (refer to **Figure 4-5**). The results of the preliminary VOC data for the vertical profile sampling were already reported in the *Interim Update to AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018c) in order to move ahead with the monitoring well installation. A summary of those vertical profile results is provided below for convenience (refer to Section 4.2.1), as well as the details regarding the monitoring well installation (Section 4.2.2). The results of the baseline groundwater samples collected from the newly installed wells (G6M-18-01 and G6M-18-02) are included in Section 4.2.3.

4.2.1 Vertical Profiling Results

Two borings were advanced using DPT technology by Cascade Drilling, of Northborough, Massachusetts, and groundwater samples were collected beginning at a depth 30-feet below the water table in October 2018. The water table was measured at a depth of 61.6 feet bgs at monitoring

well G6M-97-05B. At boring location G6M-18-01, sampling was conducted at the following intervals; 90-94 feet bgs; 100-104 feet bgs; and 110-114 feet bgs (refusal). At boring location G6M-18-02, sampling was conducted at the following intervals; 84-88 feet bgs, 94-98 feet bgs, 104-108 feet bgs, 114-118 feet bgs, and 124-128 feet bgs (refusal). As shown on **Table 4-4**, CVOCs were not detected at both boring locations.

4.2.2 Monitoring Well Installation

From January 8-9, 2019, two 2-inch diameter overburden monitoring wells (G6M-18-01; G6M-18-02) were drilled and installed at AOC50. The wells were drilled using sonic drilling methods utilizing a 6-inch core barrel by Cascade Drilling, of Northborough, Massachusetts, with oversight by a KGS geologist. In accordance with the *Interim Update to AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018), since CVOCs were non-detect at both locations, well screens were placed at similar intervals at nearby wells. The closest monitoring well to G6M-18-01 is G6M-13-02X, which is screened from 115-125 feet bgs. Therefore, the screen interval for G6M-18-01 was placed from 116-126 feet bgs (148.58 to 138.58 NAVD88). For G6M-18-02, the closest existing monitoring well is G6M-97-05B, which is screened from 130 to 135 feet bgs. Therefore, the screen interval for G6M-18-02 was placed from 123.95 to 133.95 feet bgs (142.69 to 132.69 NAVD88). Both monitoring wells consist of a 2-inch diameter, 10-foot PVC screen (slot size 0.010-inch) connected to a 2-inch PVC riser to surface. Copies of the monitoring well construction diagrams are provided in **Appendix A**. Refer to **Figure 4-5** for locations. As previously stated in Section 3.1, these two wells were developed on January 10, 2019 in accordance with the *AOC50 Field Sampling Plan Addendum and Monitoring Well Installation* (KGS, 2018b). Well development forms are provided in **Appendix A**.

4.2.3 Groundwater Results

On January 14, 2019, groundwater samples were collected at G6M-18-01 and G6M-18-02 in accordance with the low-flow procedures documented in *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells* [USEPA Region 1, 2017] and the procedures described in Section 3.1. Groundwater samples were analyzed for VOCs only.

As shown on **Table 4-5** and presented on **Figure 4-5**, groundwater samples were non-detect for VOCs. The results of these wells help bound the western edge of the plume in Areas 4/5 thereby acting as sentinel wells. Field forms are provided in **Appendix A**.

4.2.4 Hydraulic Conductivity (K) Testing

While conducting low flow sampling on January 14, 2019, testing was performed to calculate an estimated hydraulic conductivity (K) value for monitoring wells G6M-18-01 and G6M-18-02. Flow rates (mL/min) and water levels were measured over time in order to determine the steady state drawdown (refer to **Appendix A** for logs). The tests were performed three times for quality assurance purposes. All three values were entered into the Ellipsoidal Flow Steady State Model. Additional parameters (saturated screen length [L]) and well screen diameter [D]) were gathered from the monitoring well construction logs.

4.2.4.1 Hydraulic Conductivity (K) Results

The hydraulic conductivity for G6M-18-01 was calculated to be 3.63 feet/day or 1.28 x 10^{-3} centimeters per second (cm/s). The hydraulic conductivity for G6M-18-02 was calculated to be 3.29 feet/day or 1.16 x 10^{-3} cm/s (**Appendix A**).

4.3 Quality Assurance/Quality Control

Test America Laboratories, Inc. (Test America) of Savannah, Georgia, was the primary contract laboratory used for the analysis of groundwater samples for the spring and fall 2018 LTM events, the fall 2018 vertical profile sampling, and the 2019 new well sampling events. Test America is compliant with the *Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, version 5.1* (DoD, 2017) under the DoD National Environmental Laboratory Accreditation Program (ELAP) and holds current National Environmental Laboratory Accreditation Program (NELAP) accreditation for all applicable analytical methods.

As part of the 2018/2019 groundwater sampling events, quality assurance/quality control (QA/QC) samples were collected to ensure that the data quality objectives were met for the 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.

The analytical results from the 2018/2019 sampling events were reviewed and evaluated for data acceptability in accordance with the USEPA Region 1 data validation guidelines (USEPA New England, 2013), the *Quality Assurance Project Plan (QAPP) for the Annual Long-Term Monitoring (LTM) Program* (KGS, 2016), and the DoD *General Data Validation Guidelines* (DoD, 2018). The method requirements from the *DoD QSM* version 5.1 (DoD, 2017) and the USEPA SW-846 QC guidance (USEPA, 2014) were also used as supplemental information. The data validation reports for the 2018 AOC 50 LTM sampling events, fall 2018 vertical profile sampling and 2019 new well sampling events are presented in **Appendix C**. The data from all AOC50 sampling events are acceptable for use with minimal QC deviations. Specific QC deviations requiring qualification in the 2018 data sets included:

- Field duplicate precision for one VOC field duplicate and paired sample, and one miscellaneous parameter (sulfate) field duplicate and paired samples were outside the acceptable range;
- Low level method blank cross-contamination for acetone, manganese, TOC and/or nitrate/nitrite;
- Low level equipment blank contamination for lead and,
- MS and MSD recovery and precision results outside the acceptance criteria for select analytes. dissolved arsenic, select non-target VOCs, nitrate/nitrite, and TOC.

The MS/MSD recovery and precision non-compliances are likely due to matrix effects from high levels of target compounds in select samples. Associated blank spike recoveries were within acceptance limits. Appropriate qualifiers, if needed, have been added to the 2018/2019 analytical data in **Table 4-2**, **Table 4-3**, **Table 4-4**, **Table 4-5**, and **Appendix D.**

4.4 Laboratory and Field Corrective Actions

Laboratory

Analyses were performed in general compliance with the precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) requirements listed in the LTMMP QAPP (KGS, 2016). Good analytical practices and method requirements were followed, and the laboratory was determined to be performing properly. No significant QC deficiencies were noted. Although some results required qualification based on the issues listed above; useable analyte results are reported for 99.9% of samples from the 2018 LTM sampling events.

Field

There were no major field corrective actions required in 2018. 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.

5.0 LAND-USE CONTROL MONITORING

Land Use Controls (LUCs) were a key component of the *Final Record of Decision, AOC 50* (ARCADIS, 2004) and *Final Remedial Action Work Plan, AOC50* (ARCADIS, 2005) (RAWP) 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 AOC 50. LUCs are implemented in the North Plume, the Source Area, and the Southwest 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 unlimited exposure and unrestricted use.

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

- 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/remediation.

Additional objectives in 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/child care facilities and inhalation of vapors released from groundwater to indoor air.

The objectives of the LUCs for AOC 50 are imposed through legal mechanisms, which have been set up to 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.

Property inspections and interviews with stakeholders are conducted annually to verify the continued 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 E**.

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 (CERCLA) programs that are applicable to Area G (Regional Training Site Maintenance), as well as, for three other deeded areas located at the DRFTA. Refer to **Appendix E** for the Addendum to the Real Property Master Plan.

Any proposed actions that affect the AOC 50 property must consider following the ROD 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; and,
- Coordinate construction plans for modifications to storm water systems with the BCT.

Furthermore, the deed notices provided at the time of property transfer to USFWS, Henry Woodle of Groton Ayer Realty Trust, and Ron Ostrowski of MassDevelopment, inform each owner of their property use restrictions.

Monitoring activities performed for the 2018 reporting period included a review of the documentation and records, on-site inspections, and annual LUC interviews with AOC 50 property owners.

5.1 On-site Inspections

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

- 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; and,
- Any site access issues related to monitoring and remediation activities.

AOC 50 was inspected in October 2018. No evidence of increased exposure potential or the installation of groundwater extraction wells was observed. Two new monitoring wells were installed on the western edge of the AOC 50 plume in December 2018. There were no issues encountered related to site access for monitoring and remediation activities during the 2018 physical property inspection.

5.2 Land-Use Control Interview

Telephone interviews were conducted with each property owner, manager, or other designee familiar with “day-to-day” activities of the property. During the interviews, the KGS team personnel 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; and,
- Proposed plans for property sale, future development, construction, or demolition activities at AOC 50.

Mr. Robert Simeone, BRAC Environmental Coordinator, stated that no change in the property use has occurred during 2018 and that the Army continues to implement the cleanup remedy at the site.

Mr. Ron Ostrowski of MassDevelopment, reiterated the same information stating that no change had occurred on the property during 2018.

Mr. Tom Eagle of USFWS stated that he was not aware of any changes to the property during 2018.

Mr. Henry Woodle of the Groton Ayer Realty Trust stated that there have been no changes to his property during 2018. He did indicate that he is interested in pursuing removal of LUC restrictions in the North Plume area.

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 since there were no changes in site conditions or land use. There are no proposed changes to inspection and reporting frequency at this time.

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6.0 SUMMARY

The LTM and O&M activities were successfully performed in 2018 in accordance with the LTMMP (KGS, 2017) and QAPP (KGS, 2016). LTM activities included semiannual groundwater sampling resulting in the collection of 55 samples across both events (Area 1 – 17 samples, Area 2 – 3 samples, Area 3 – 5 samples, Area 4 – 6 samples, and Area 5 – 24 samples). O&M activities included ERD injections by direct injection at 37 DPT locations and at 10 permanent injection wells. The DPT injections consisted of injecting a total of 25,400 gallons of ABC®-Ole'+ at a 15 or 20 wt% solution between 16 locations in Area 1, four locations in Area 3, and 17 locations southwest of Area 5 injection wells. The injections into permanent injection wells located in Area 3, Area 4, and Area 5, consisted of injecting a total of 4,500 gallons of ABC® Ole' mixture at 20 wt% solution between the three areas.

No further additional maintenance activities were performed in 2018.The LUCs were verified through inspection and interviews.

Two new monitoring wells were installed in Areas 4/5 and were non-detect for VOCs, thus bounding the western portion of the PCE plume in this area.

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7.0 REFERENCES

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FIGURES



Figure 1-1
Site Location
AOC 50

References: LTMMP (HGL/Sovereign 2015)
Aerial Sources: 2016, Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

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

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Fort Devens Reserve Forces Training Area, Devens MA

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100, Marlborough, MA 01752

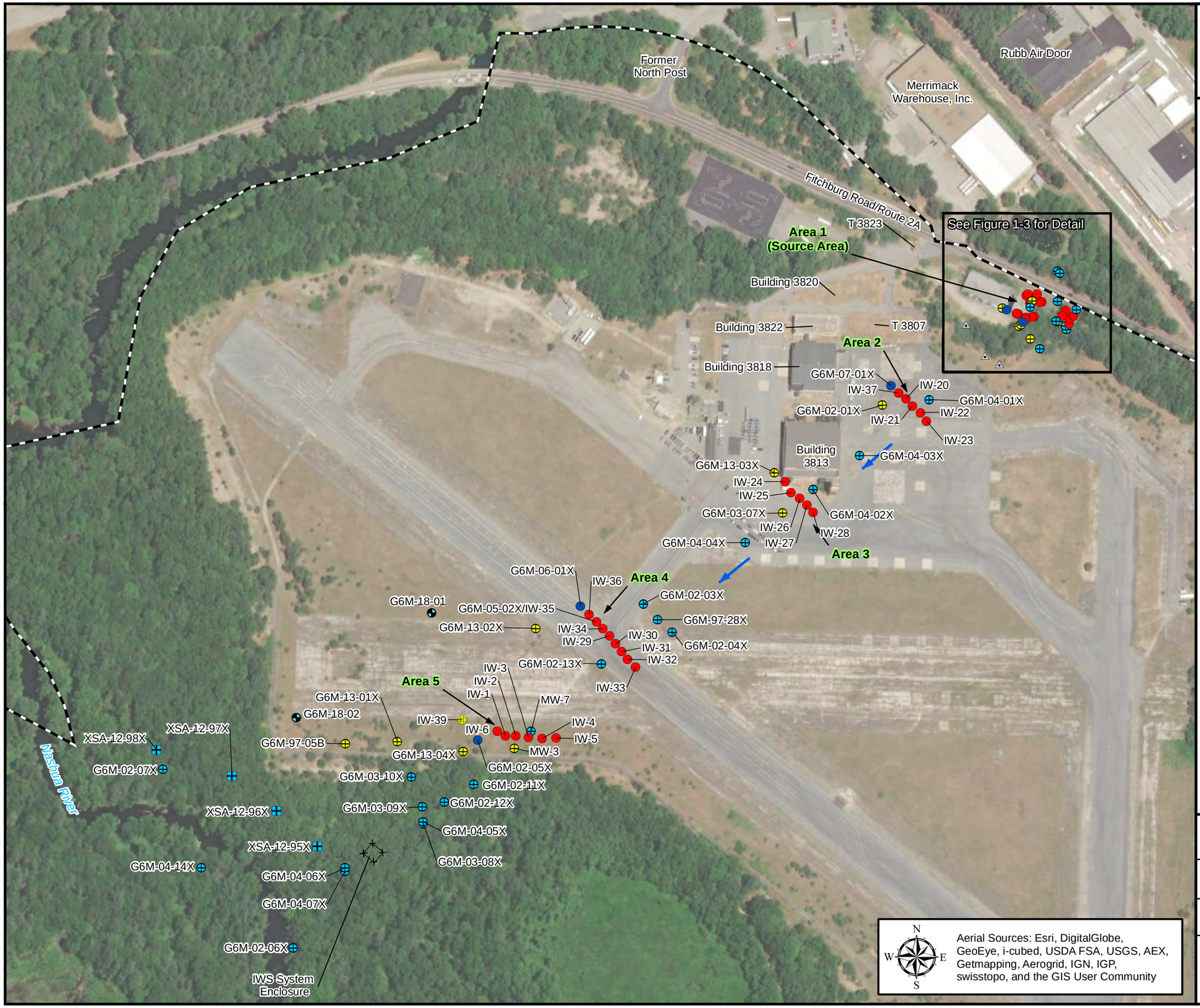
0 1,750 3,500
Feet

Date: 01/25/2019

Figure 1-1

File: AR2018_AOC50_F1-1_Site.mxd

Figure 1-2
Site Layout
AOC 50



Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Legend

- Newly Installed Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Groundwater Flow Direction
- Former Fort Devens Boundary

Notes:
ERD = Enhanced reductive dechlorination
IWS = In-well stripping
LTM = Long-term monitoring

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

KOMAN Government Solutions, LLC
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0 150 300
Feet

Date: 07/19/2019

Figure 1-2

File: AR2018_AOC50_F1-2_Layout.mxd

Figure 1-3
Site Layout, Source Area
AOC 50



Legend

- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- 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
- Former Fort Devens Boundary

N W E S

Aerial:
USGS, MassGIS

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

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0 17.5 35
Feet

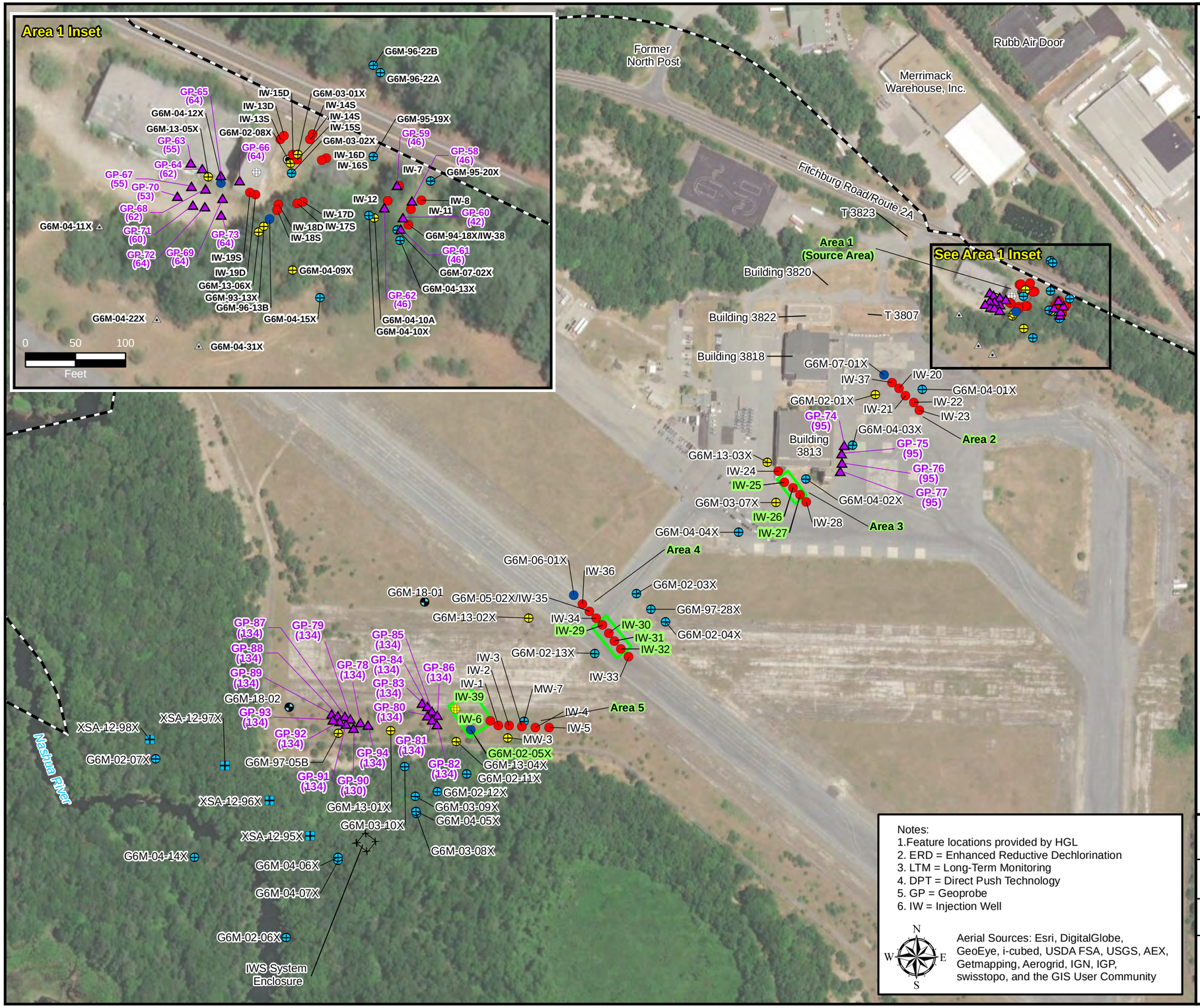
Date:
07/19/2019

Figure
1-3

KGS

File: AR2018_AOC50_F1-3_SourceArea.mxd

Figure 2-1
ERD Injection Locations
August 2018



Legend

- IW-25 — Permanent Injection Well used in 2018
- Geoprobe Injection Location - August 2018
- (42) — Final Injection Depth
- Newly Installed Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- ERD Injection Well Transect
- Former Fort Devens Boundary

Notes:
1. Feature locations provided by HGL
2. ERD = Enhanced Reductive Dechlorination
3. LTM = Long-Term Monitoring
4. DPT = Direct Push Technology
5. GP = Geoprobe
6. IW = Injection Well

N W E S

Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100 Marlborough, MA 01752

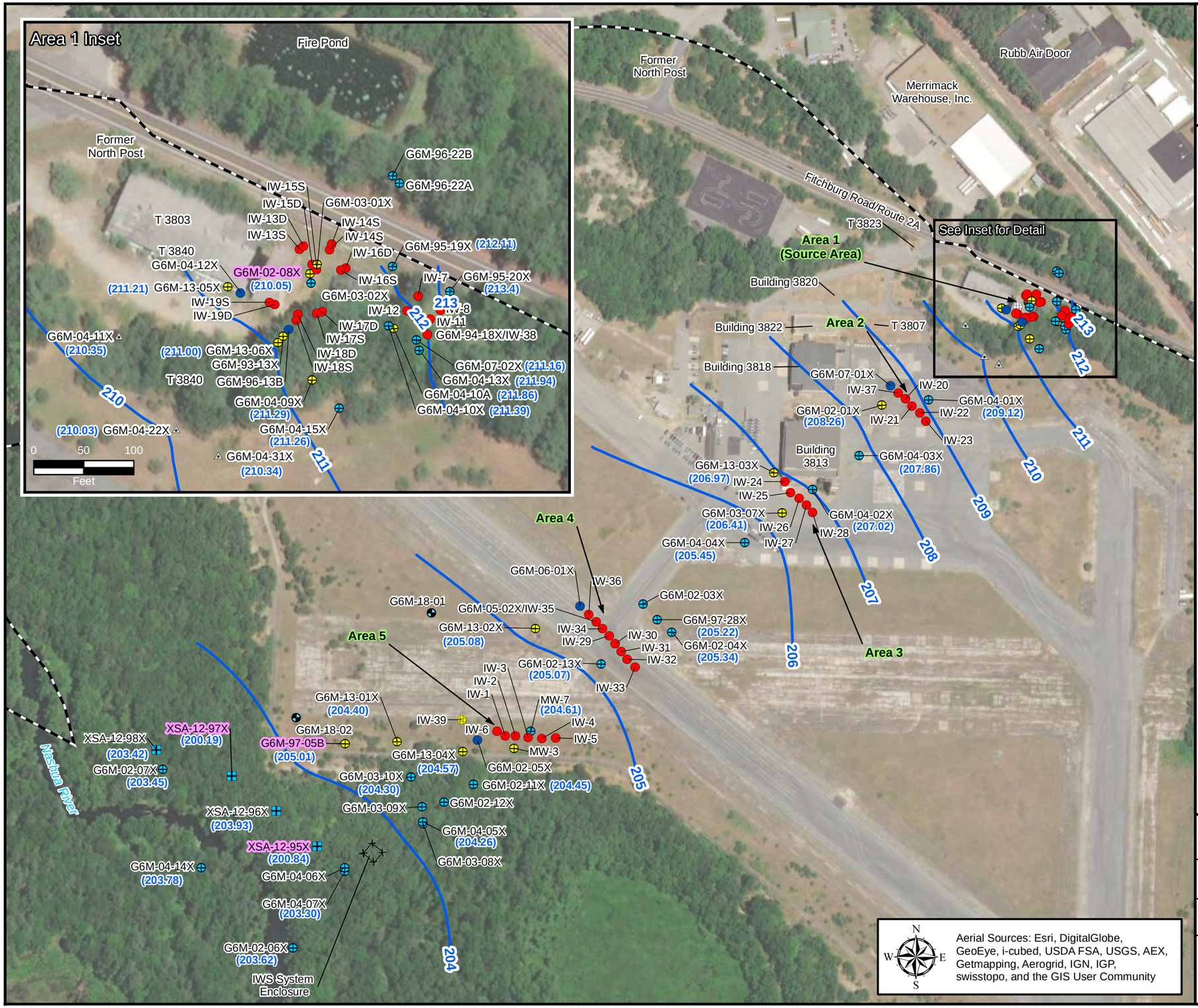
0 150 300
Feet

Date: 07/19/2019

Figure 2-1

File: AR2018_AOC50_F2-1_ERD_InjectionLoc.mxd

Figure 3-1
Groundwater Contour Map
AOC 50
April 2, 2018



Legend

- Newly Installed Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- (204.40) Groundwater Elevation (ft NAVD88)
- Groundwater Contour (ft NAVD88) (Interval = 1 FT)
- Former Fort Devens Boundary

Notes:

G6M-02-08X, G6M-97-05B, XSA-12-95X and XSA-12-97X were not used in contouring.

ERD = Enhanced reductive dechlorination
IWS = In-well stripping
LTM = Long-term monitoring

Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100, Marlborough, MA 01752

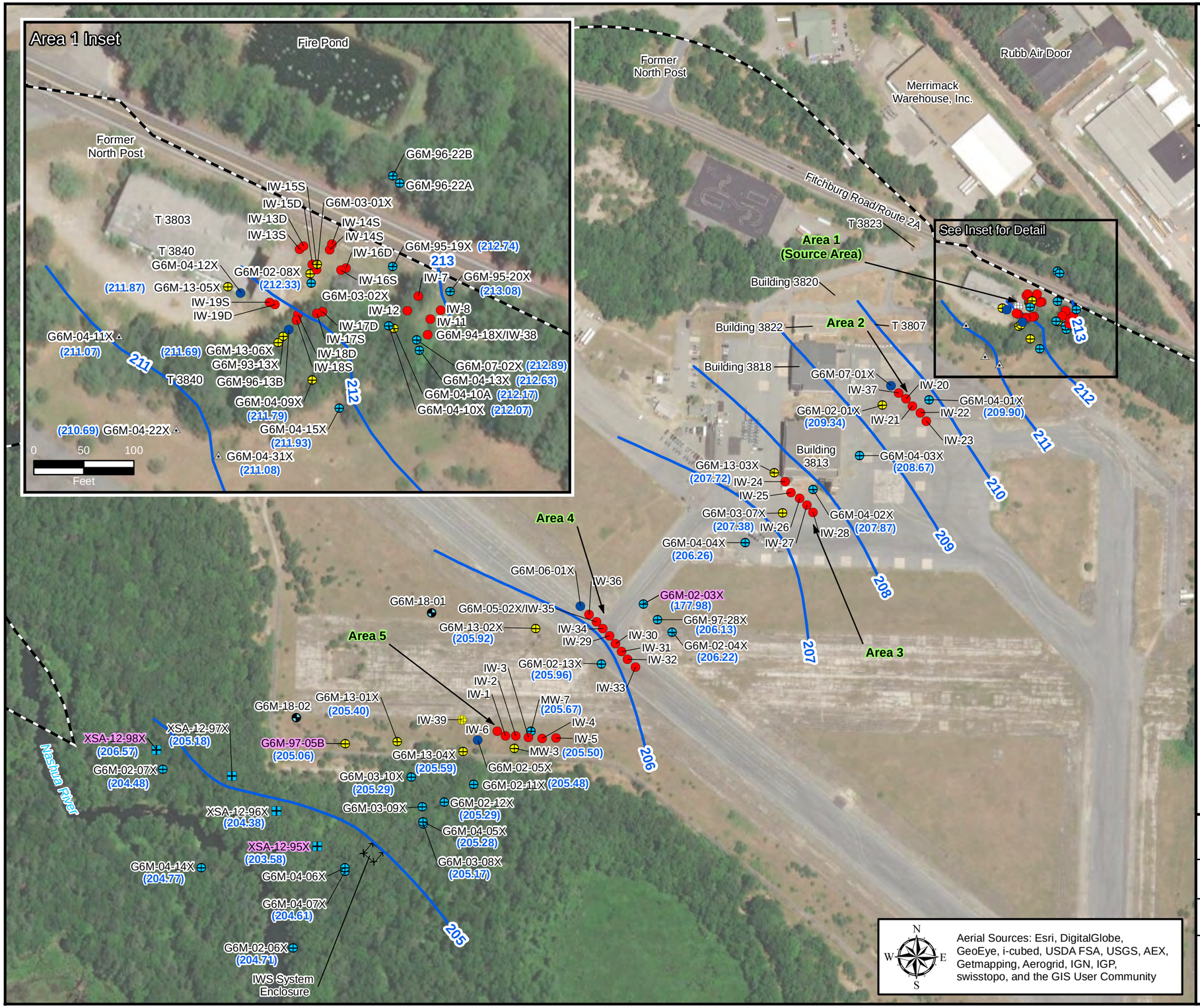
0 150 300
Feet

Date: 07/19/2019

Figure 3-1

File: AR2018_AOC50_F3-1_April2018_GWC.mxd

Figure 3-2
Groundwater Contour Map
AOC 50
October 15, 2018



Legend

- Newly Installed Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- (208.67) Groundwater Elevation (ft NAVD88)
- Groundwater Contour (ft NAVD88) (Interval = 1 FT)
- Former Fort Devens Boundary

Notes:

G6M-02-03X, G6M-97-05B, XSA-12-95X and XSA-12-98X were not used in contouring.

ERD = Enhanced reductive dechlorination
IWS = In-well stripping
LTM = Long-term monitoring

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

KOMAN Government Solutions, LLC
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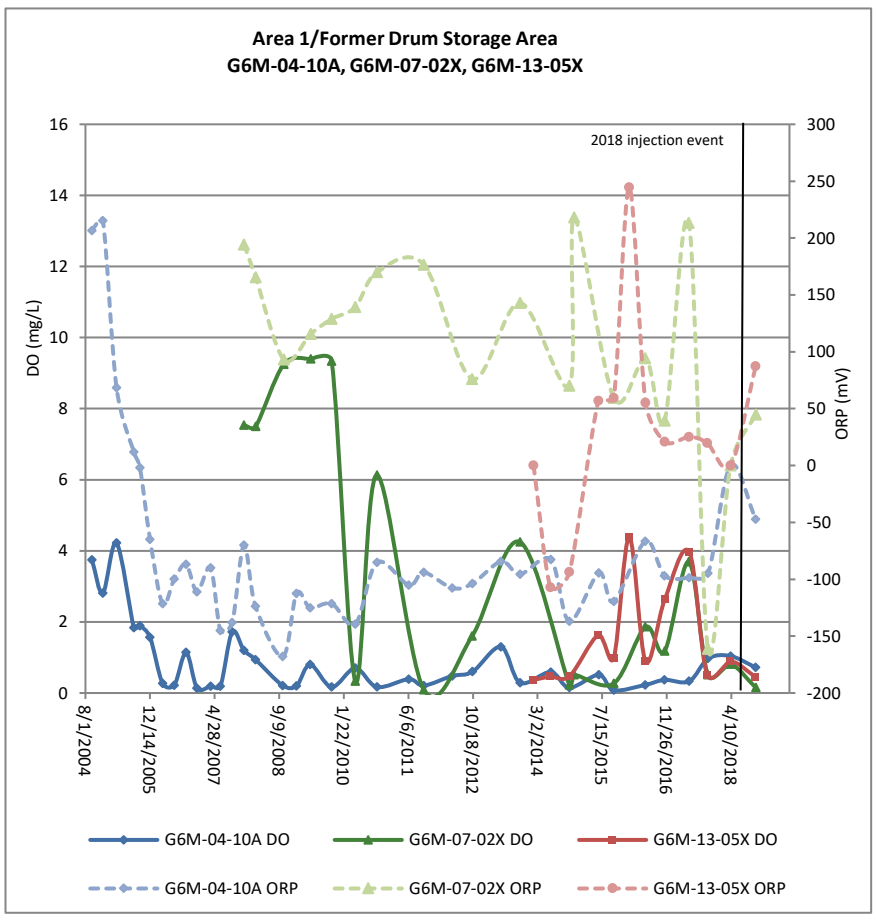
0 150 300
Feet

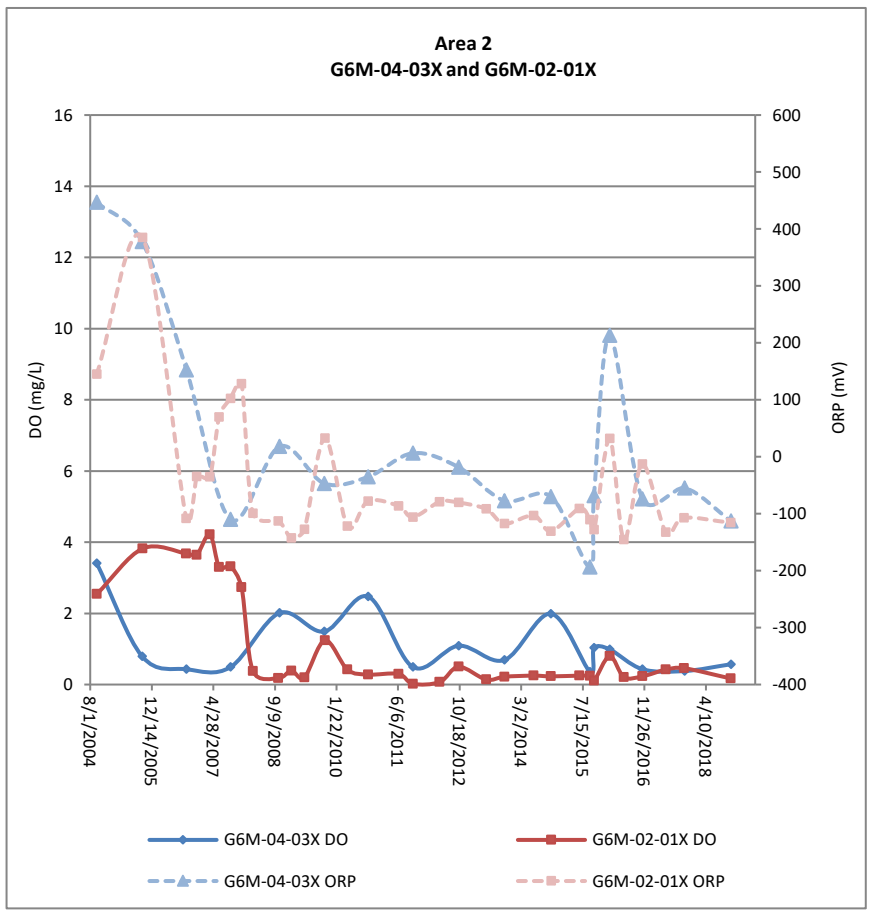
Date: 07/19/2019

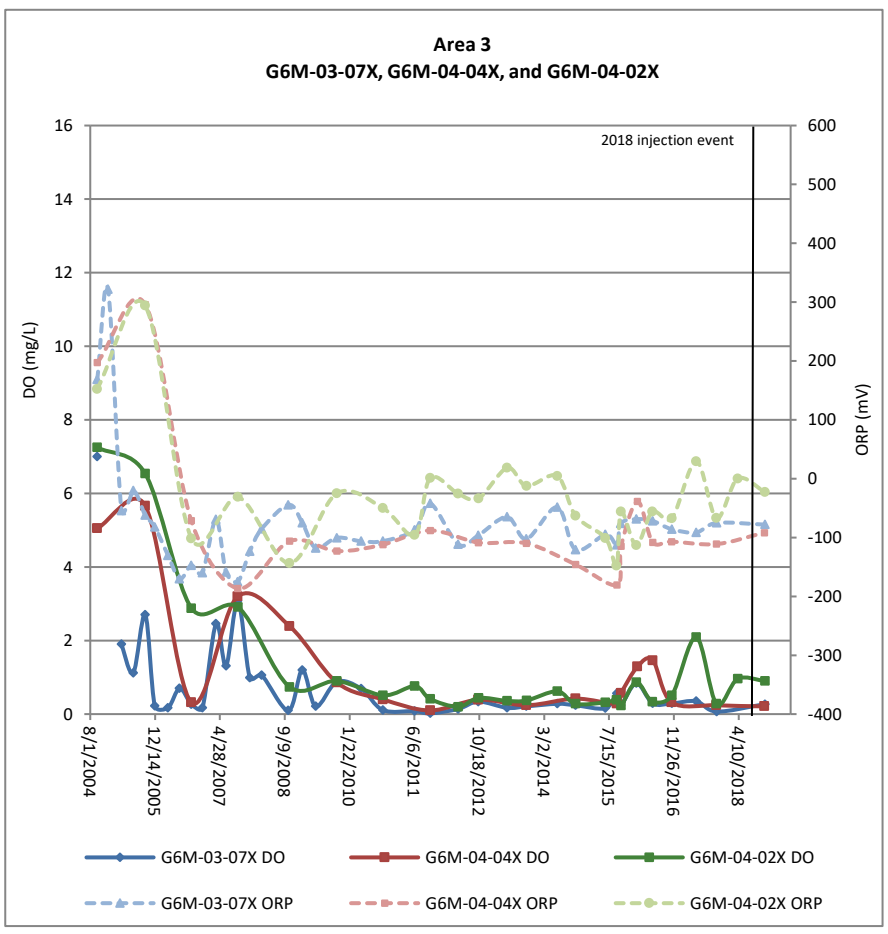
Figure 3-2

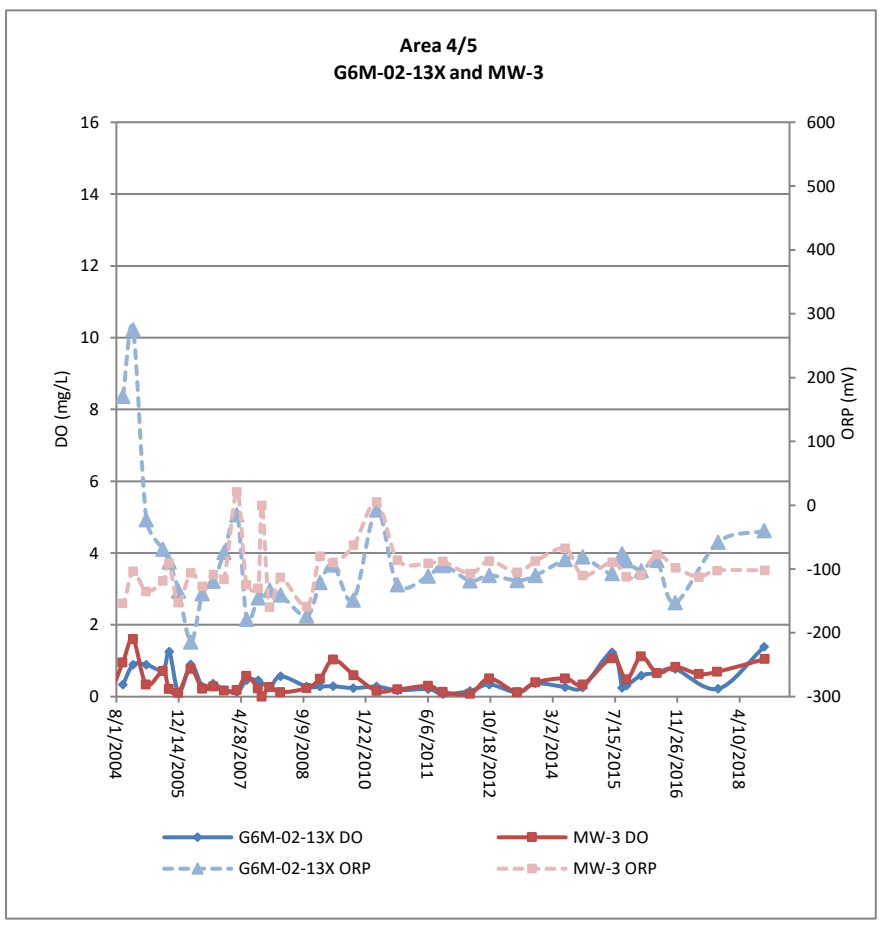
File: AR2018_AOC50_F3-2_Octl2018_GWC.mxd

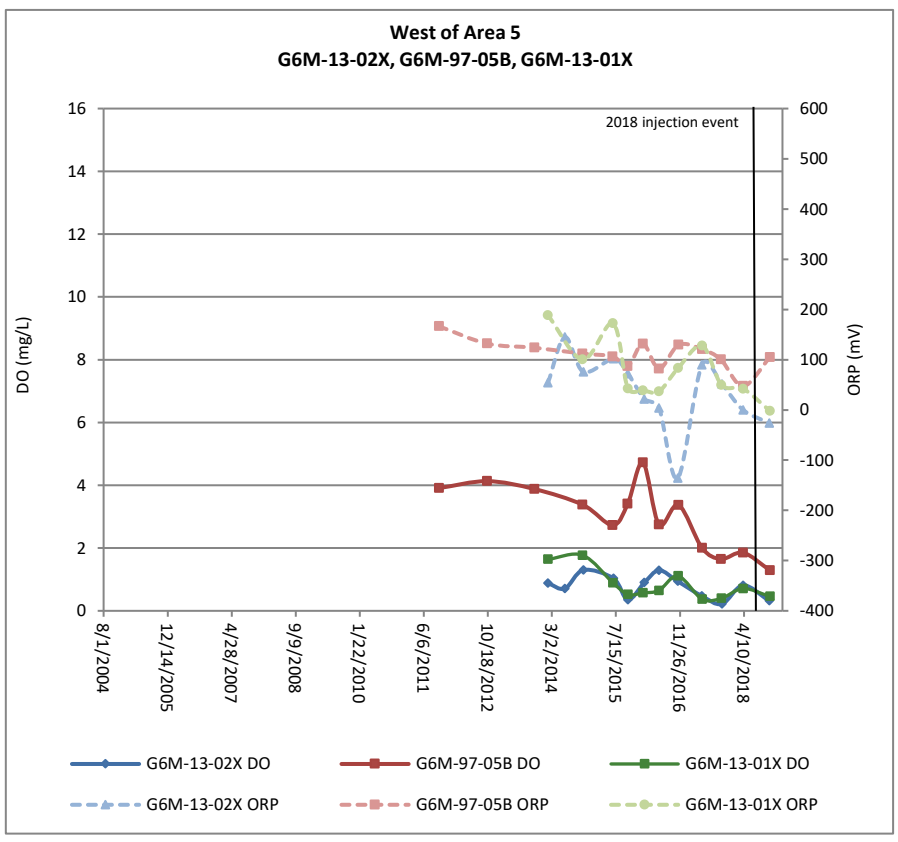
Figure 4-1
Dissolved Oxygen and Oxidation Reduction Potential Trend Graphs

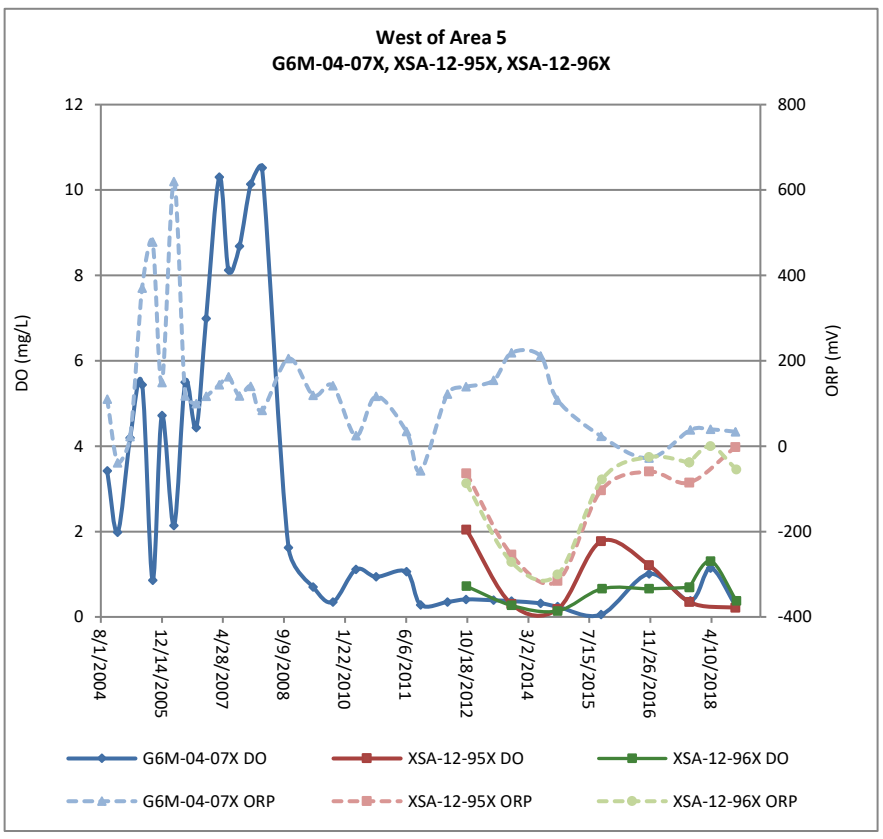






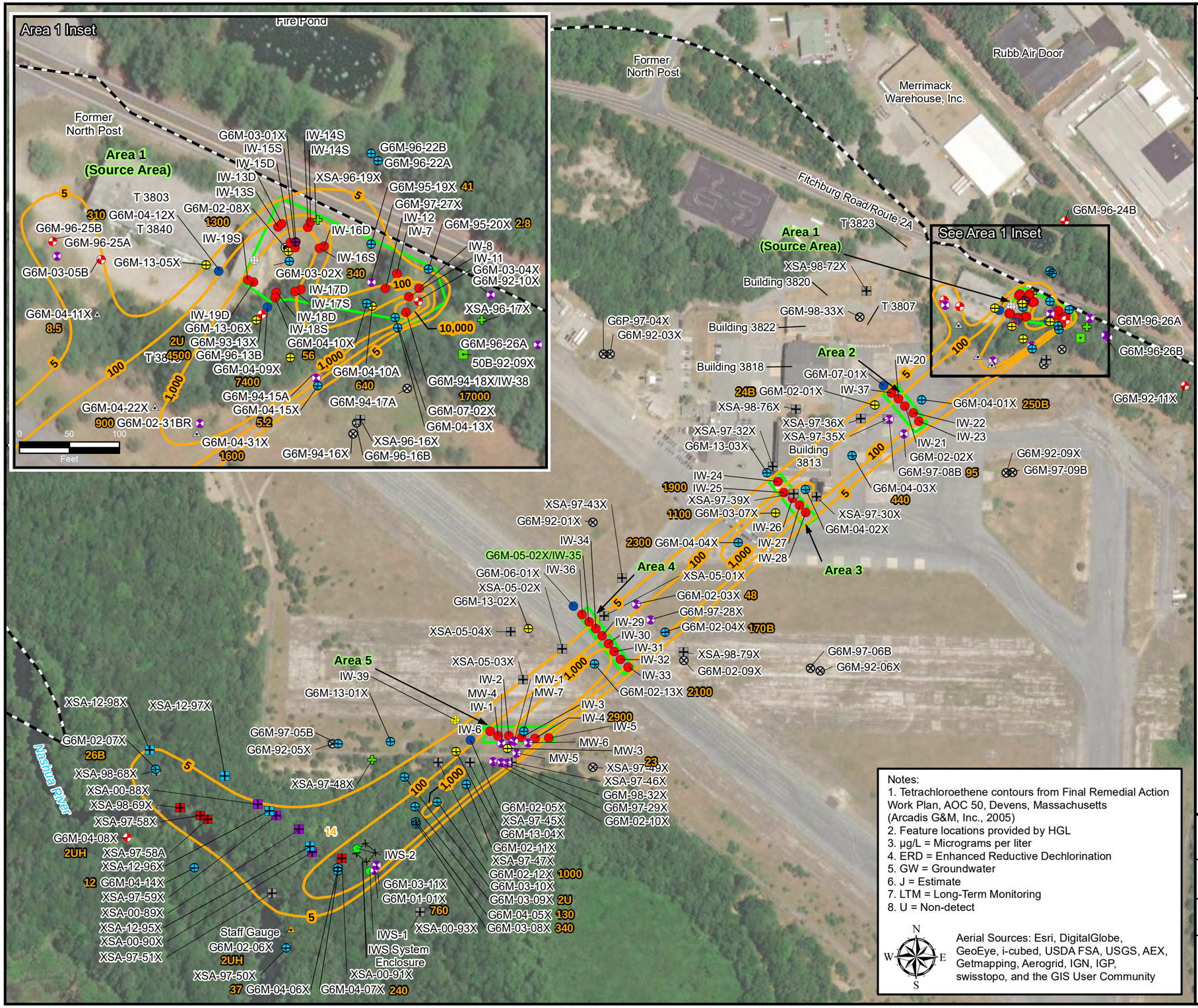






DO = dissolved oxygen mV = milli Volts
mg/L = milligrams per liter ORP = oxidation reduction potential

Figure 4-2
Tetrachloroethene Concentrations in Groundwater, 2004 AOC 50



Legend

- 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®
- Historic Temporary MicroWell®
- Injection Well Installed Prior to 01/2014
- Staff Gauge
- Historic Vertical Groundwater Profiling Location
- Historic Soil Boring
- Injection Well Installed 01/2014
- Abandoned Well
- Dry Well
- Floor Drain
- Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- Tetrachloroethene (PCE) Concentration (µg/L)
- ERD Injection Well Transect
- Former Fort Devens Boundary

Notes:
1. Tetrachloroethene contours 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, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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AOC 50

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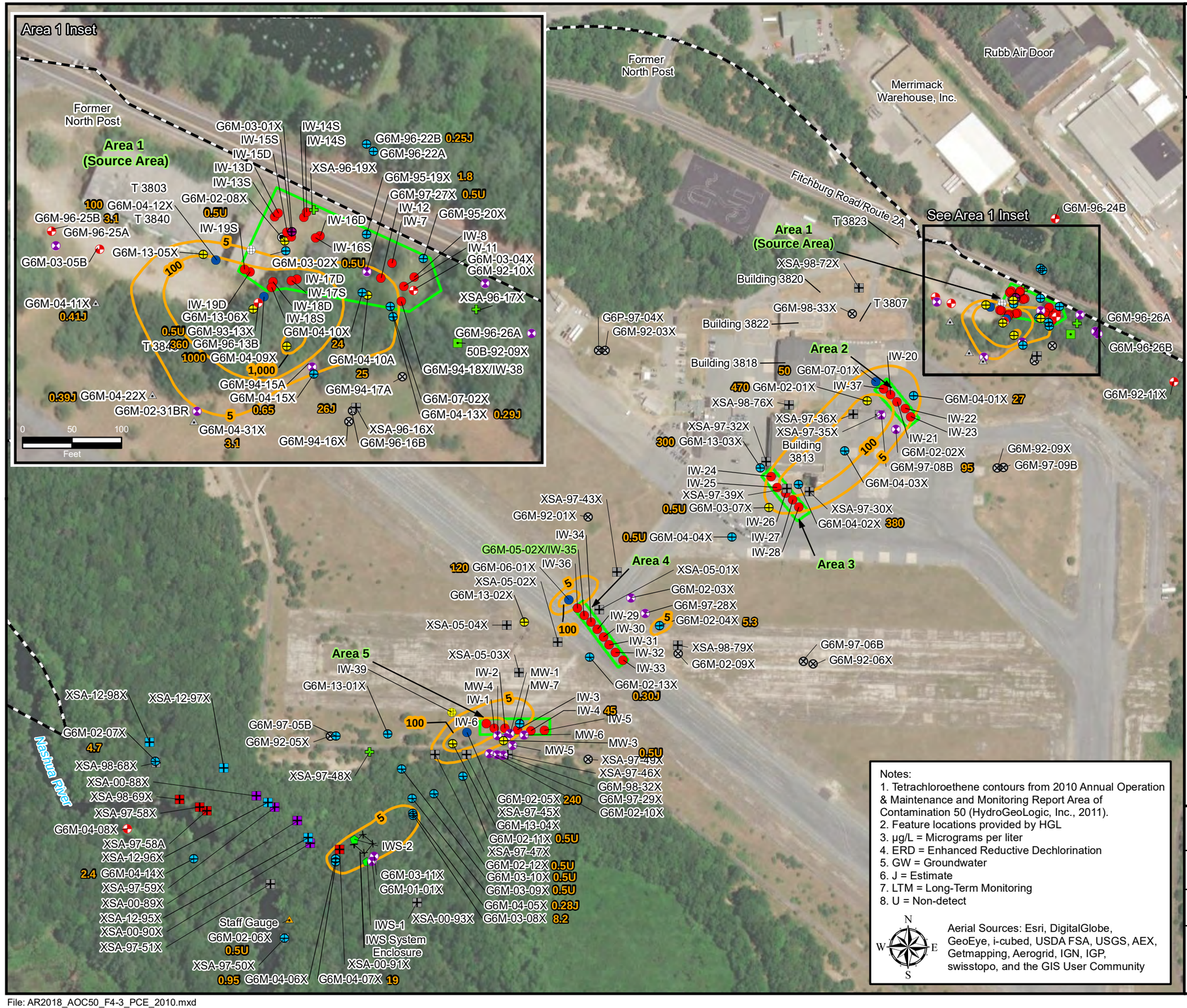
0 150 300 Feet

Date: 02/14/2020

Figure 4-2

File: AR2018_AOC50_F4-2_PCE_2004.mxd

Figure 4-3
Tetrachloroethene Concentrations in Groundwater, 2010 AOC 50



Legend

- 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®
- Historic Temporary MicroWell®
- Injection Well Installed Prior to 01/2014
- Staff Gauge
- Historic Vertical Groundwater Profiling Location
- Historic Soil Boring
- Injection Well Installed 01/2014
- Abandoned Well
- Dry Well
- Floor Drain
- Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- Tetrachloroethene (PCE) Concentration (µg/L)
- ERD Injection Well Transect
- Former Fort Devens Boundary

Notes:
1. Tetrachloroethene contours from 2010 Annual Operation & Maintenance and Monitoring Report Area of Contamination 50 (HydroGeoLogic, Inc., 2011).
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, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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AOC 50

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0 150 300
Feet

Date: 02/14/2020

Figure 4-3

File: AR2018_AOC50_F4-3_PCE_2010.mxd

Figure 4-4
Tetrachloroethene Concentrations in Groundwater, October 2015, AOC 50

Area 1 Inset

Fire Pond

Former North Post

Area 1 (Source Area)

Area 2

Area 3

Area 4

Area 5

See Area 1 Inset

Former North Post

Merrimack Warehouse, Inc.

Rubb Air Door

Fitchburg Road/Route 2A

Building 3820

Building 3822

Building 3818

Building 3813

Nashua River

0 50 100 Feet

Legend

- 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®
- Historic Temporary MicroWell®
- Injection Well Installed Prior to 01/2014
- Staff Gauge
- Historic Vertical Groundwater Profiling Location
- Historic Soil Boring
- Injection Well Installed 01/2014
- Abandoned Well
- Dry Well
- Floor Drain
- Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- Inferred Tetrachloroethene (PCE) Contour (µg/L)
- Tetrachloroethene (PCE) Concentration (µg/L)
- Former Fort Devens Boundary
- ERD Injection Well Transect

Notes:
1. Tetrachloroethene contours from 2015 Annual Operation & Maintenance (O&M) and Monitoring Report Area of Contamination 50 (KGS, Inc., 2016).
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. ND = Non-detect

N W E S

Aerial Sources: Esri, DigitalBlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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AOC 50

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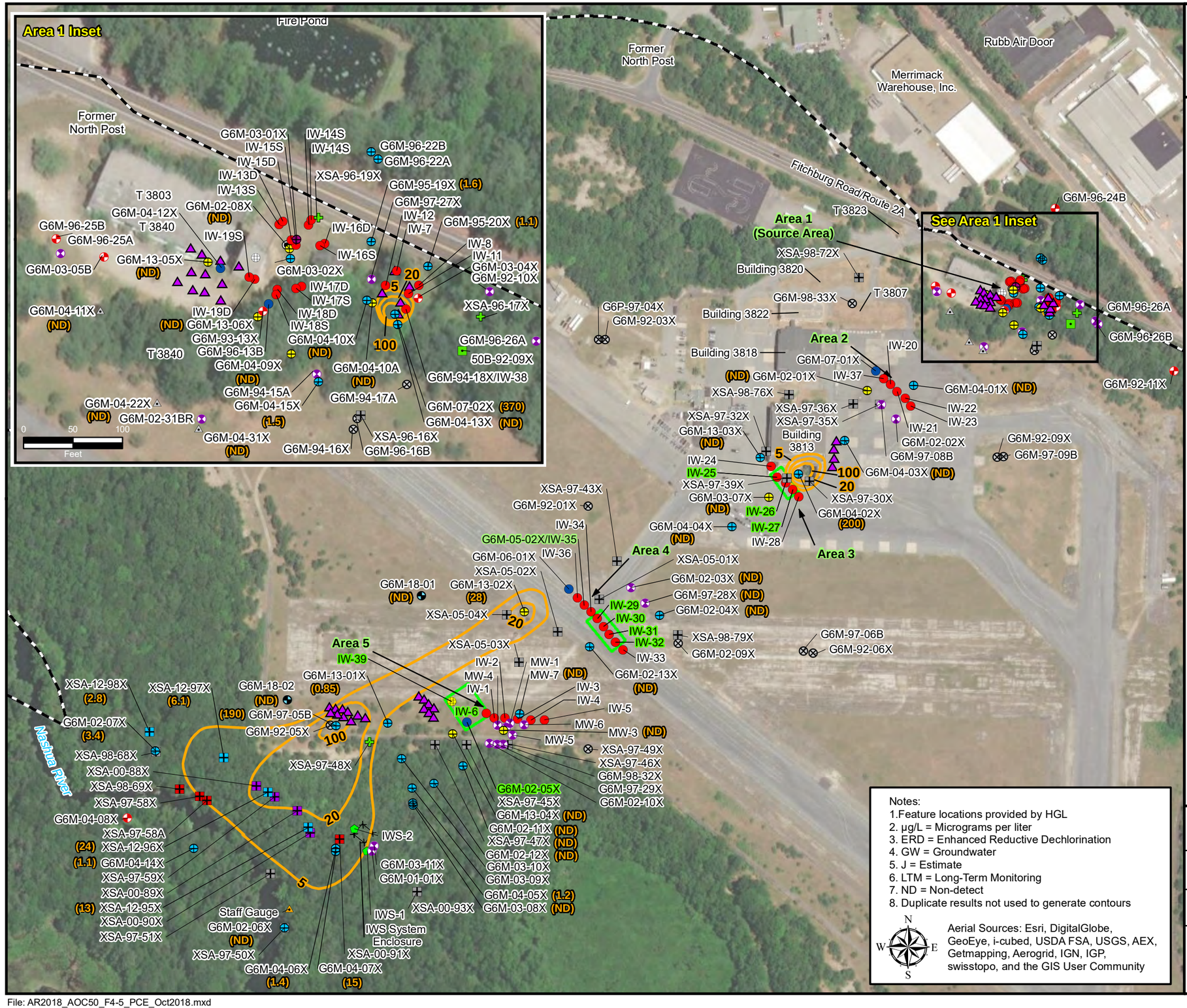
0 150 300 Feet

Date: 02/14/2020

Figure 4-4

File: AR2018_AOC50_F4-4_PCE_Oct2015.mxd

Figure 4-5
Tetrachloroethene Concentrations in Groundwater, October 2018, AOC 50



Legend

- IW-25 — Permanent Injection Well used in 2018
- Newly Installed and Sampled Monitoring Well - 01/2019
- 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®
- Historic Temporary MicroWell®
- Injection Well Installed Prior to 01/2014
- Staff Gauge
- Historic Vertical Groundwater Profiling Location
- Historic Soil Boring
- Injection Well Installed 01/2014
- Abandoned Well
- Geoprobe Injection Location - August 2018
- Dry Well
- Floor Drain
- 5 — Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- 200 — Tetrachloroethene (PCE) Concentration (µg/L)
- ERD Injection Well Transect
- Former Fort Devens Boundary

Notes:
1. Feature locations provided by HGL
2. µg/L = Micrograms per liter
3. ERD = Enhanced Reductive Dechlorination
4. GW = Groundwater
5. J = Estimate
6. LTM = Long-Term Monitoring
7. ND = Non-detect
8. Duplicate results not used to generate contours

Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2018 Annual Report
AOC 50

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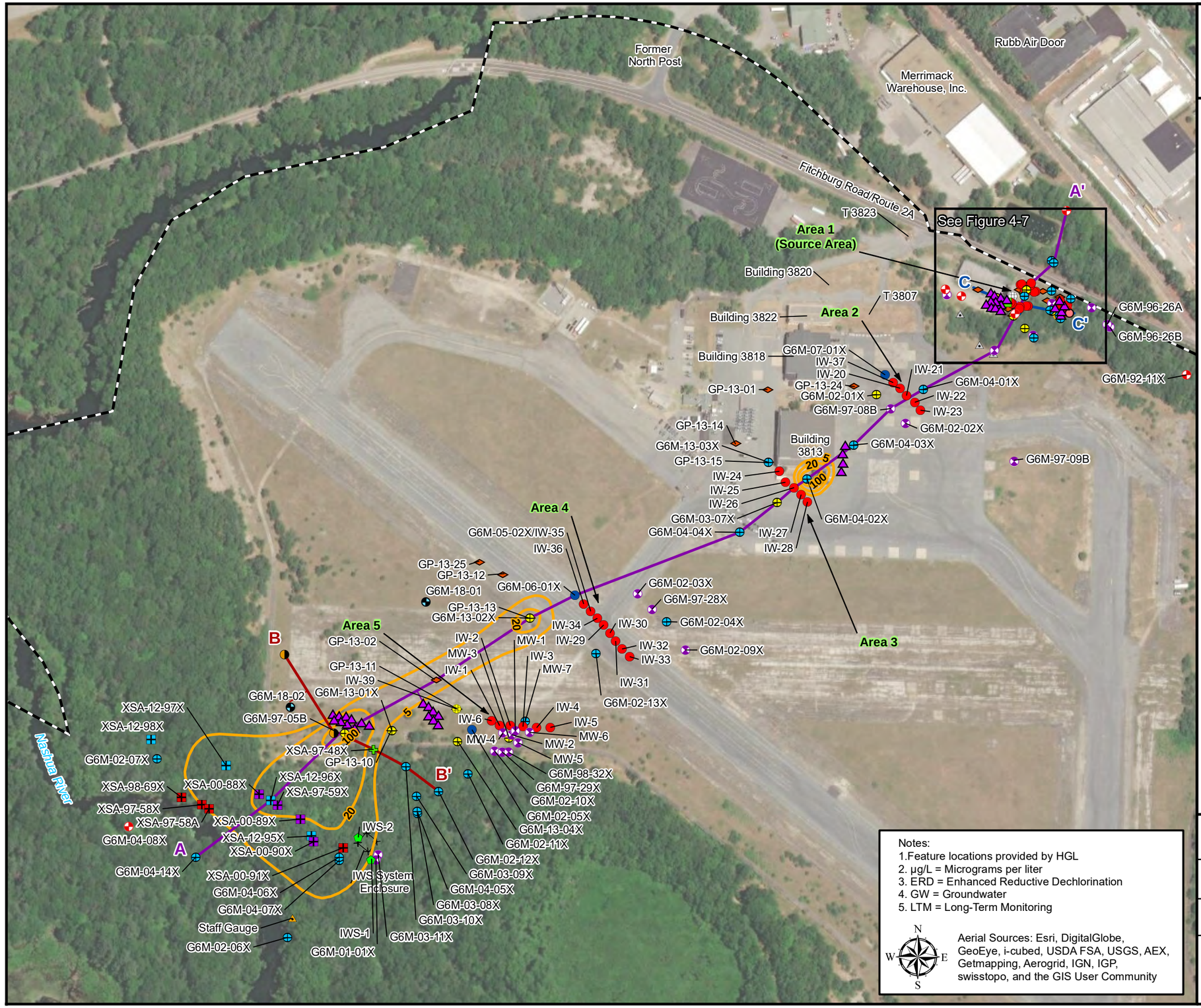
Date: 02/14/2020

Figure 4-5

File: AR2018_AOC50_F4-5_PCE_Oct2018.mxd

Figure 4-6
Cross-Section Plan View
AOC 50



Legend

- Geoprobe Injection Location - August 2018
- Newly Installed and Sampled Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Abandoned Well
- Historic Soil Boring
- Historic Vertical Groundwater Profiling Location
- In-Well Stripping System Well
- Injection Well Installed Prior to 01/2014
- Abandoned Injection Well
- Injection Well Installed 01/2014
- LTM Well - Gauge Only
- MicroWell
- MicroWell - Gauge Only
- MicroWell - Sampled Annually
- Monitoring Well
- Monitoring Well Converted to Injection Well
- Staff Gauge
- MiHPT Investigation Location
- Vertical Groundwater Profiling Location
- Dry Well
- Floor Drain
- October 2018 Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- Cross-Section A-A'
- Cross-Section B-B'
- Cross-Section C-C'
- Former Fort Devens Boundary

Notes:
1.Feature locations provided by HGL
2. µg/L = Micrograms per liter
3. ERD = Enhanced Reductive Dechlorination
4. GW = Groundwater
5. LTM = Long-Term Monitoring

Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2018 Annual Report
AOC 50

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Devens, Massachusetts

KOMAN Government Solutions, LLC
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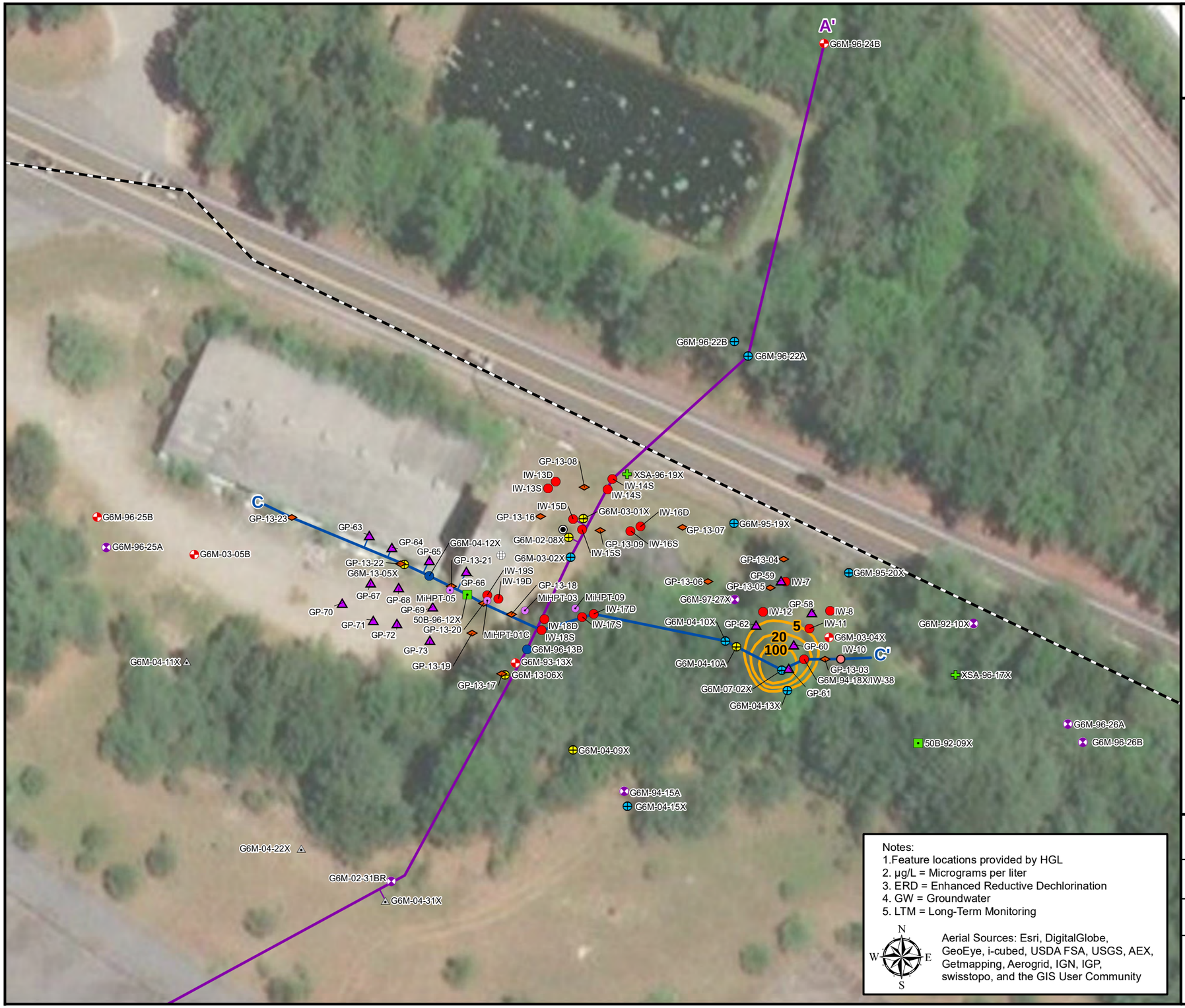
0 150 300
Feet

Date: 03/10/2020

Figure 4-6

File: AR2018_AOC50_F4-6_XSectLoc.mxd

Figure 4-7
Cross-Section Plan View
AOC 50 - Area 1



Legend

- Geoprobe Injection Location - August 2018
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Abandoned Well
- Historic Soil Boring
- Historic Vertical Groundwater Profiling Location
- In-Well Stripping System Well
- Injection Well Installed Prior to 01/2014
- Abandoned Injection Well
- Injection Well Installed 01/2014
- LTM Well - Gauge Only
- MicroWell
- MicroWell - Gauge Only
- MicroWell - Sampled Annually
- Monitoring Well
- Monitoring Well Converted to Injection Well
- Staff Gauge
- MiHPT Investigation Location
- Vertical Groundwater Profiling Location
- Dry Well
- Floor Drain
- 5 — October 2018 Interpretive Tetrachloroethene (PCE) Contour (µg/L)
- Cross-Section A-A'
- Cross-Section C-C'
- Former Fort Devens Boundary

Notes:
1.Feature locations provided by HGL
2. µg/L = Micrograms per liter
3. ERD = Enhanced Reductive Dechlorination
4. GW = Groundwater
5. LTM = Long-Term Monitoring

N W E S

Aerial Sources: Esri, DigitalGlobe, GeoEye, i-cubed, USDA FSA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

2018 Annual Report
AOC 50

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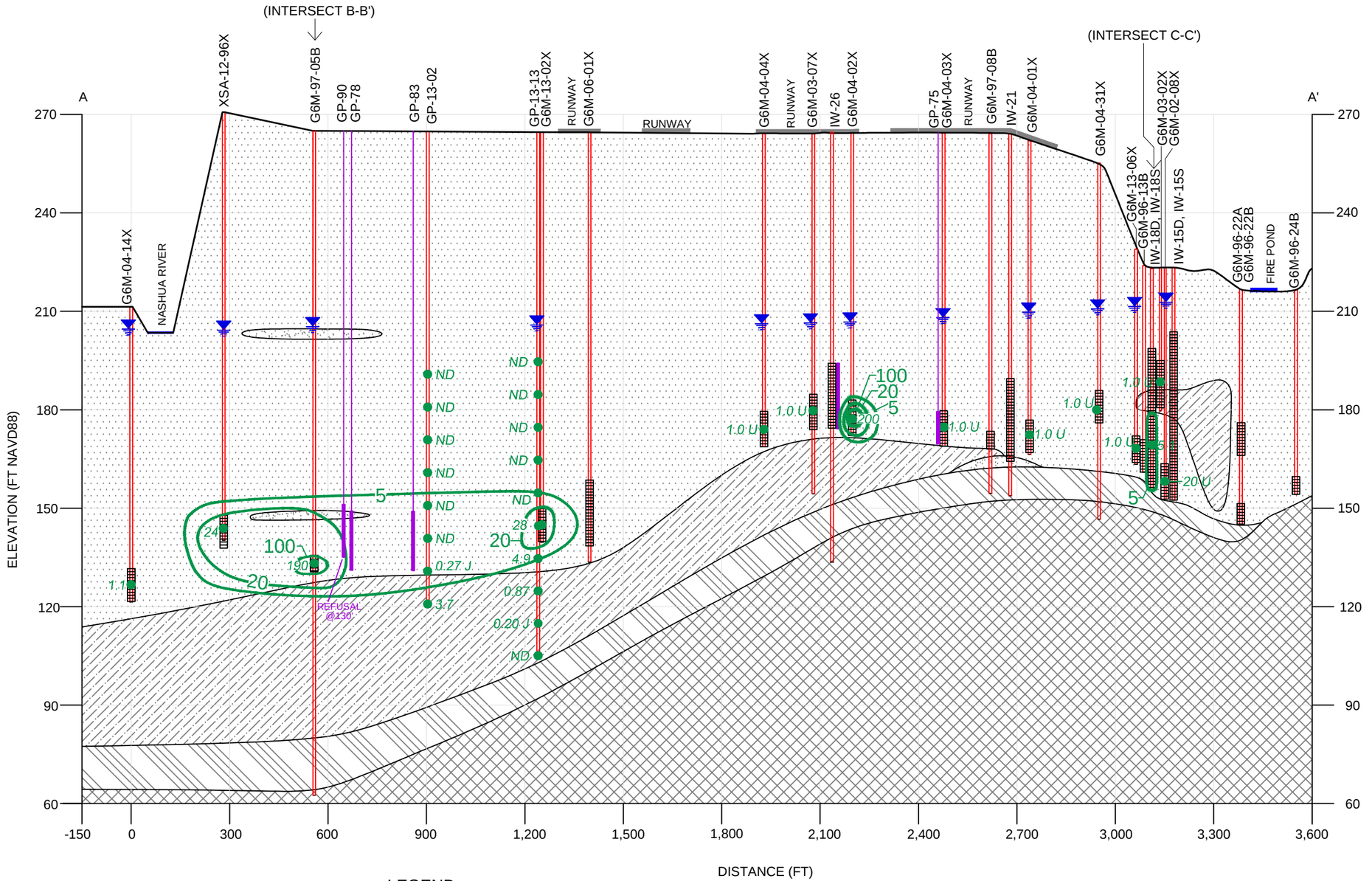
0 25 50
Feet

Date: 07/19/2019

Figure 4-7

File: AR2018_AOC50_F4-7_AREA1_XSectLoc.mxd



NOTES:

FT = FEET.
FT NAVD88 = NORTH AMERICAN VERTICAL DATUM 1988 (FT).
J = THE ANALYTE WAS DETECTED AT THE REPORTED CONCENTRATION; THE VALUE IS AN ESTIMATE.
µg/L = MICROGRAMS PER LITER.

U/ND = NON-DETECT.

GROUNDWATER PROFILING RESULTS AT GP-13-02 AND GP-13-13 WERE FROM 2013.

STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

CROSS SECTION FEATURES INCLUDING WELL LOCATIONS, SCREEN LOCATION AND LITHOLOGY FOR THE EASTERN PORTION OF THE CROSS-SECTION (G6M-04-04X TO G6M-96-24) BASED ON "FIGURE 4.10 TETRACHLOROETHENE PLUME IN GROUNDWATER (CROSS SECTION A-A') PRIOR TO ERD INJECTIONS" BY HGL ON 03/31/2014.

LEGEND

- FINE SAND
- COARSE SAND
- SILTY SAND
- GLACIAL TILL
- BEDROCK
- GW ELEVATION ON 10/15/2018
- WELL SCREEN INTERVAL
- BORING
- 2018 INJECTION INTERVAL
- G6M-13-02X — BORING/WELL IDENTIFICATION
- 28 — TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- TETRACHLOROETHENE CONTOUR (µg/L)
- SOIL TYPE BOUNDARY

Tetrachloroethene Plume in Groundwater - Cross Section, A-A'
AOC 50, October 2018

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Devens, Massachusetts

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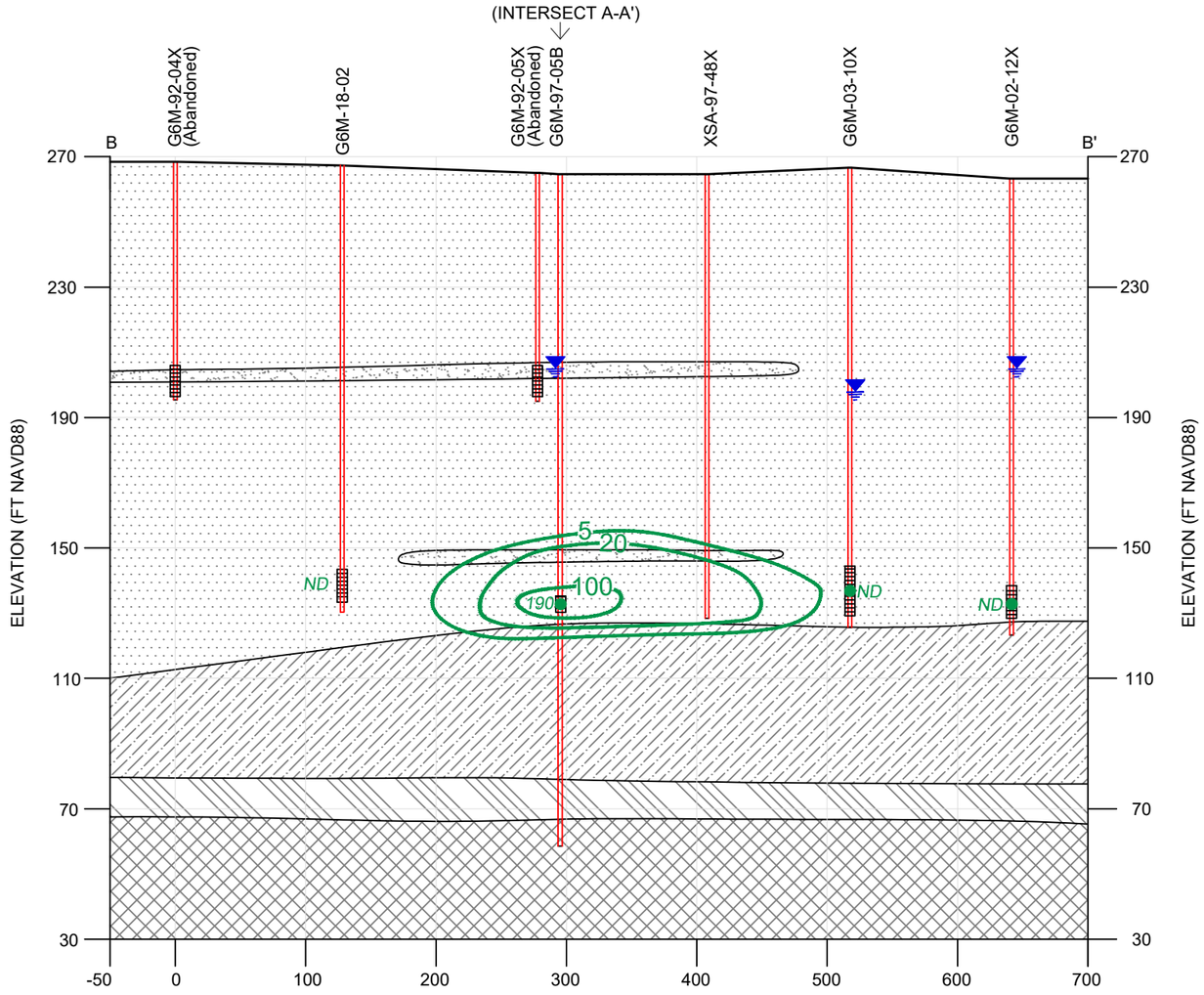
Date: 03/05/2019

Figure 4-8

X:\HS_Environmental\FortDevens_Mass\Drawings\AOC50_XSections\AR_2018\AR2018_AOC50_XSections.dwg



LEGEND

- FINE SAND
- COARSE SAND
- SILTY SAND
- GLACIAL TILL
- BEDROCK
- GW ELEVATION ON 10/18//2018
- WELL SCREEN INTERVAL
- BORING
- SOIL TYPE BOUNDARY
- G6M-03-10X — BORING/WELL IDENTIFICATION
- 190 — TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- TETRACHLOROETHENE CONTOUR (µg/L)

NOTES:

FT = FEET.
FT NAVD88 = NORTH AMERICAN VERTICAL DATUM 1988 (FT)
µg/L = MICROGRAMS PER LITER.

ND = NON-DETECT.

MONITORING WELL G6M-18-02 WAS INSTALLED AND SAMPLED IN JANUARY 2019.

STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

CROSS SECTION FEATURES INCLUDING WELL LOCATIONS, SCREEN LOCATION AND LITHOLOGY AT G6M-92-04X, G6M-97-05B AND XSA-97-78X BASED ON "FIGURE 6 TETRACHLOROETHENE PLUME IN GROUNDWATER (CROSS SECTION C-C') OCTOBER 2013" BY HGL ON 03/31/2014.

Tetrachloroethene Plume in Groundwater - Cross Section, B-B'
AOC 50, October 2018

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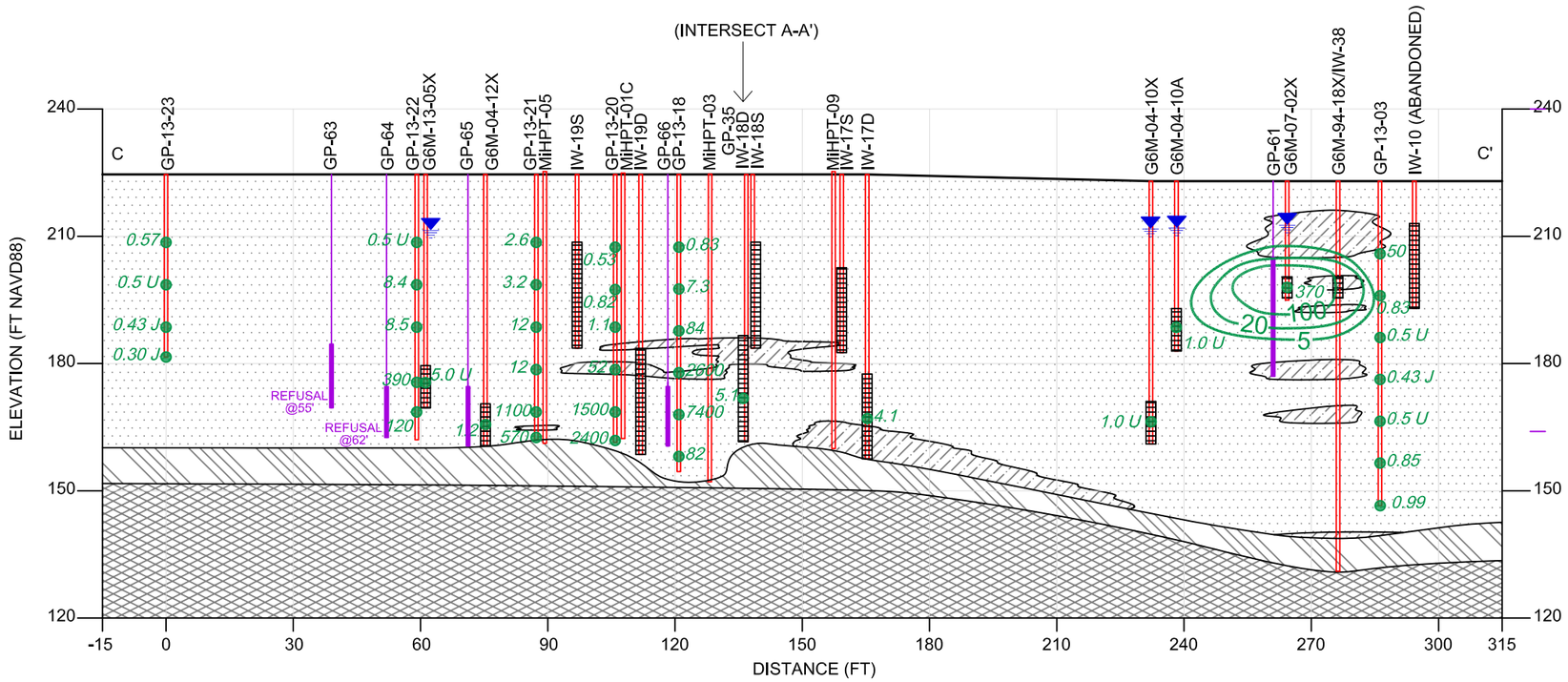
Devens, Massachusetts

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100, Marlborough, MA 01752

	Date: 03/05/2019	Figure 4-9	KGS

X:\HS_Environmental\FortDevens_Mass\Drawings\AOC50_XSections\AR_2018\AR2018_AOC50_XSections.dwg



NOTES:

FT = FEET.
FT NAVD88 = NORTH AMERICAN VERTICAL DATUM 1988 (FT).
J = THE ANALYTE WAS DETECTED AT THE REPORTED CONCENTRATION; THE VALUE IS AN ESTIMATE.
U = ANALYTE WAS DETECTED BELOW LABORATORY DETECTION LIMIT.
µg/L = MICROGRAMS PER LITER.

GROUNDWATER PROFILING RESULTS AT GP LOCATIONS WERE FROM 2013.

STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

LEGEND

- FINE SAND
- SILTY SAND
- GW ELEVATION ON 10/15/2018
- GLACIAL TILL
- BEDROCK
- WELL SCREEN INTERVAL
- BORING
- 2018 INJECTION INTERVAL
- G6M-13-05X — BORING/WELL IDENTIFICATION
- 370 — TETRACHLOROETHENE SAMPLE CONCENTRATION (µg/L)
- TETRACHLOROETHENE CONTOUR (µg/L)
- SOIL TYPE BOUNDARY

Tetrachloroethene Plume in Groundwater - Cross Section, C-C'
AOC 50, October 2018

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

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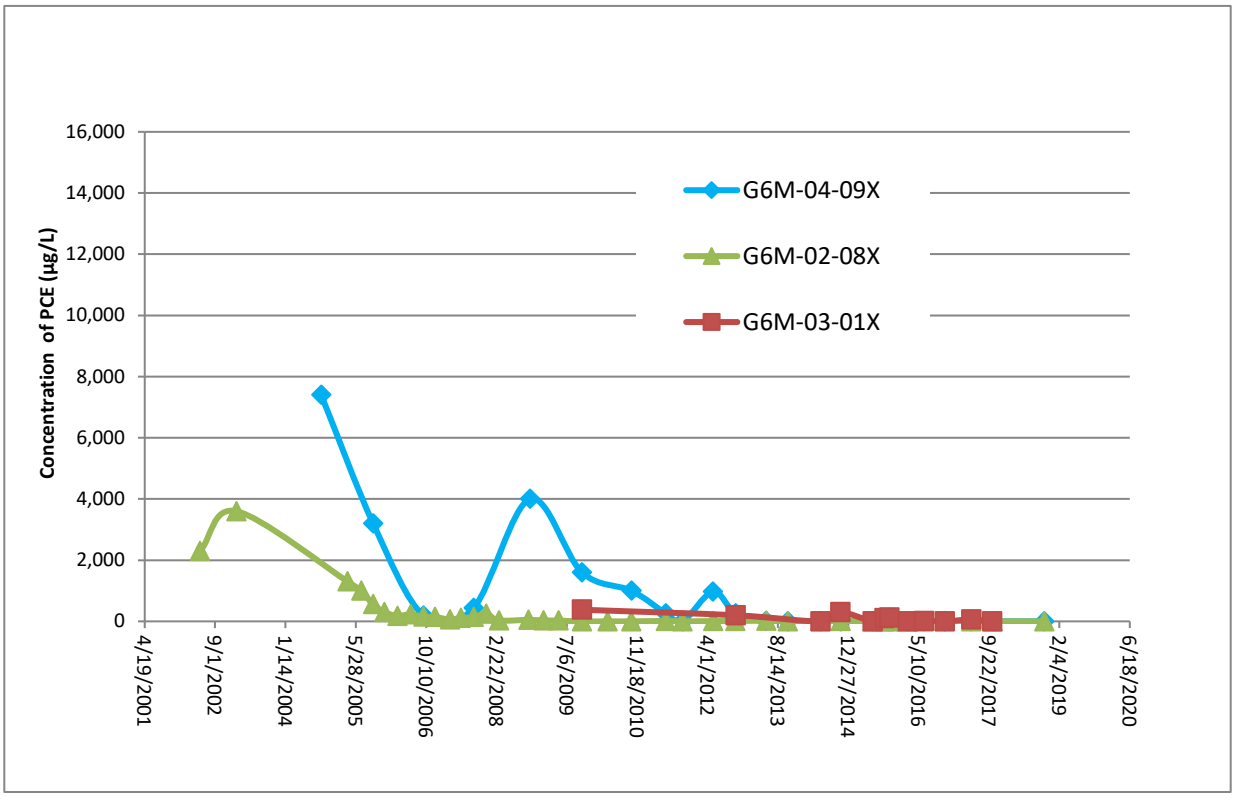
	Date: 03/05/2019	Figure 4-10	KGS

X:\HS_Environmental\FortDevens_Mass\Drawings\AOC50_XSections\AR_2018\AR2018_AOC50_XSections.dwg

Figure 4-11
Area 1 PCE Concentration Trend Graph



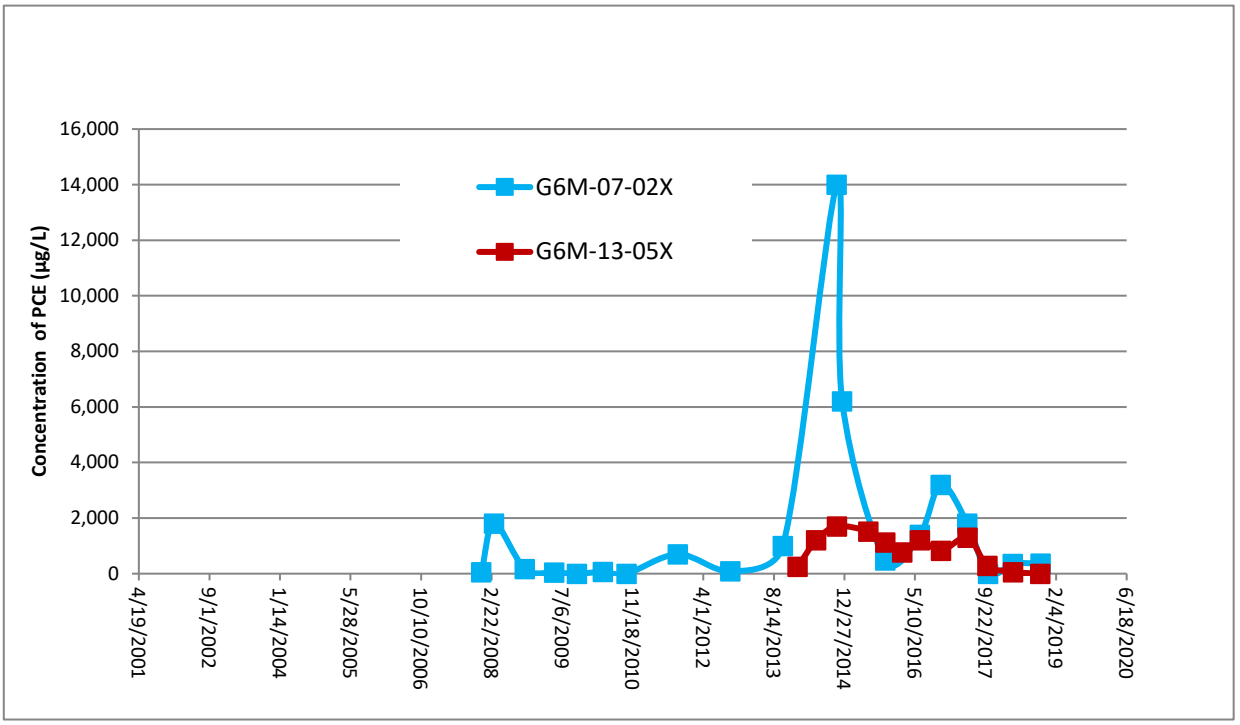


Figure 4-12
Area 2 PCE Concentration Trend Graph

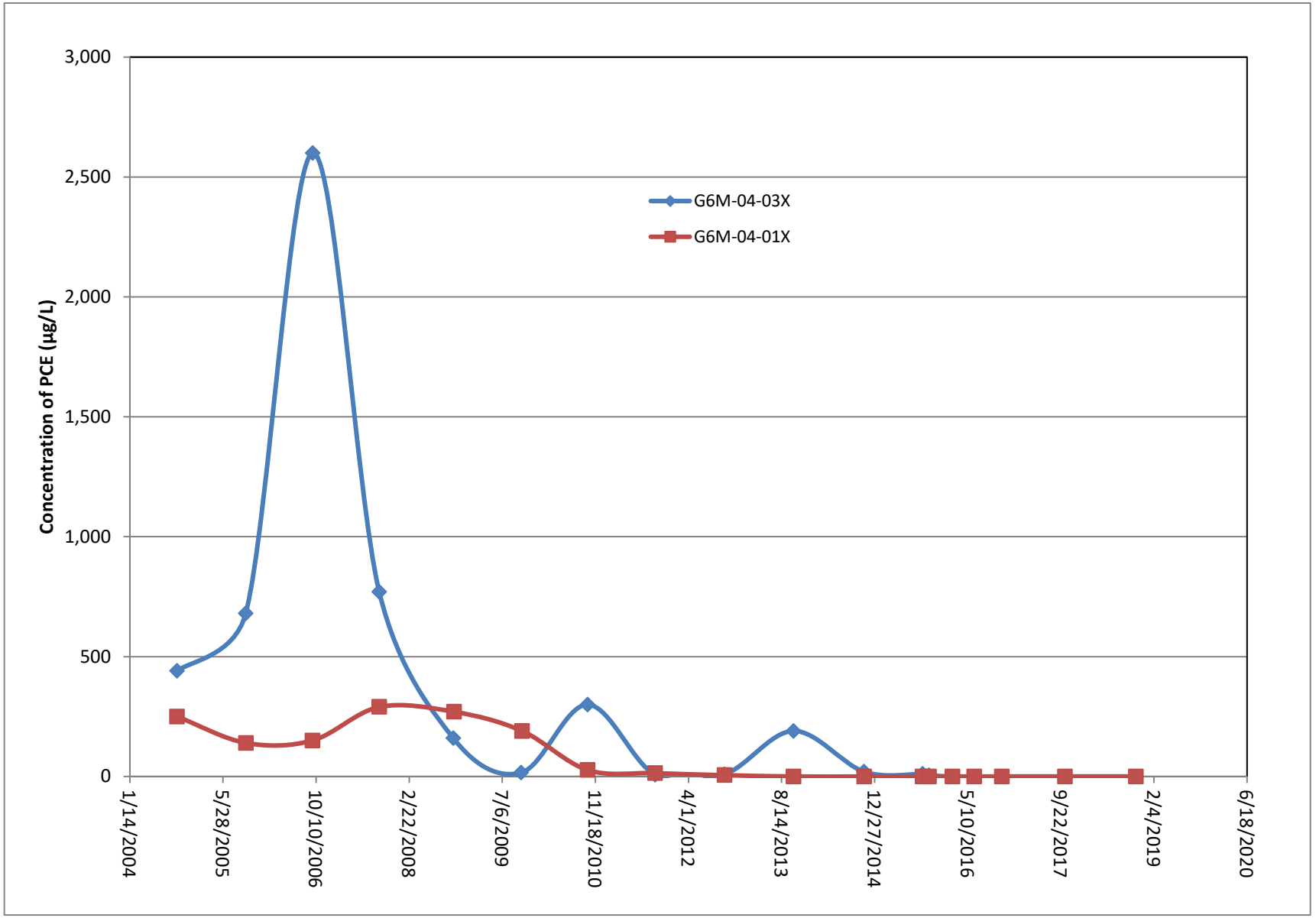


Figure 4-13
Area 3 PCE Concentration Trend Graph

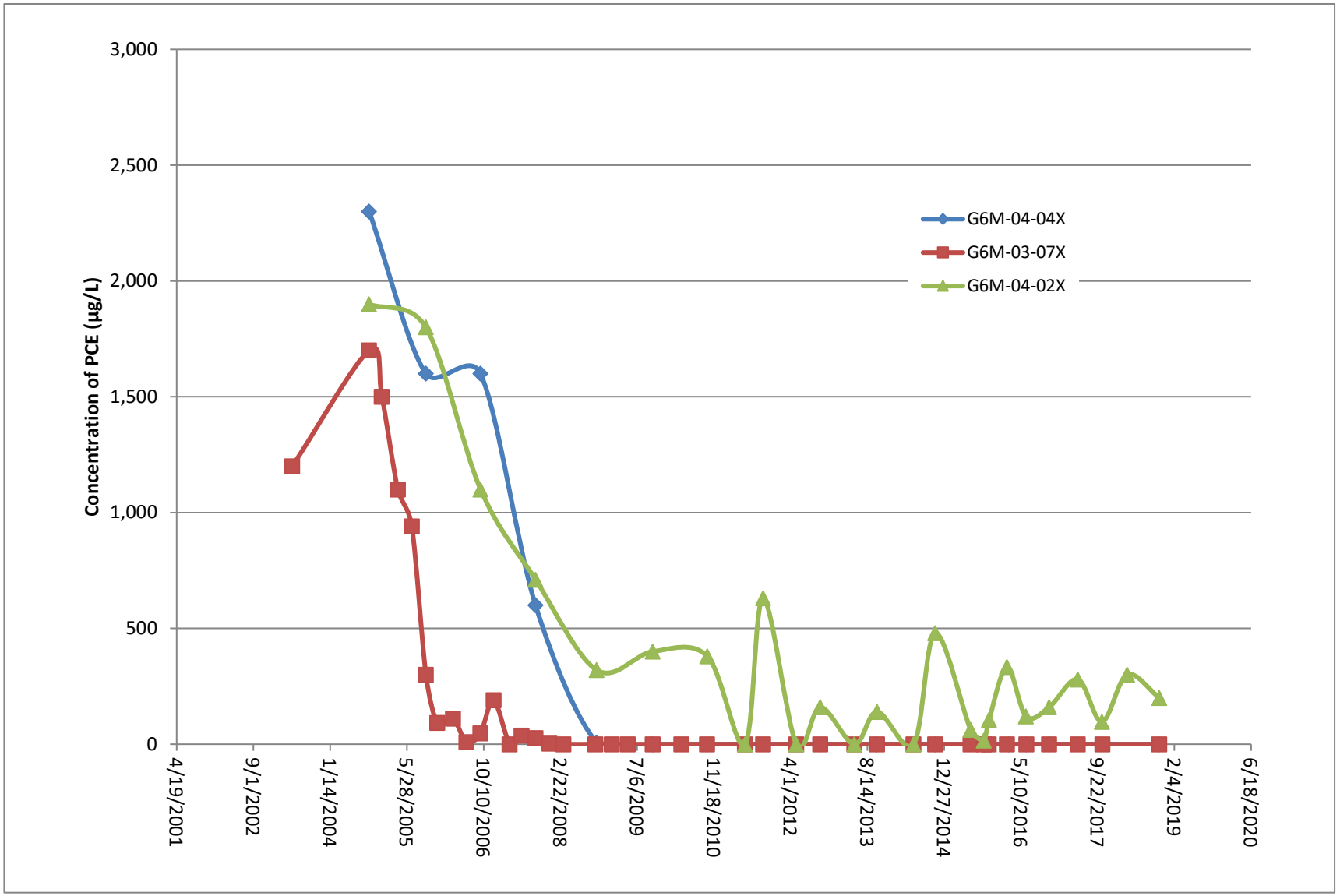
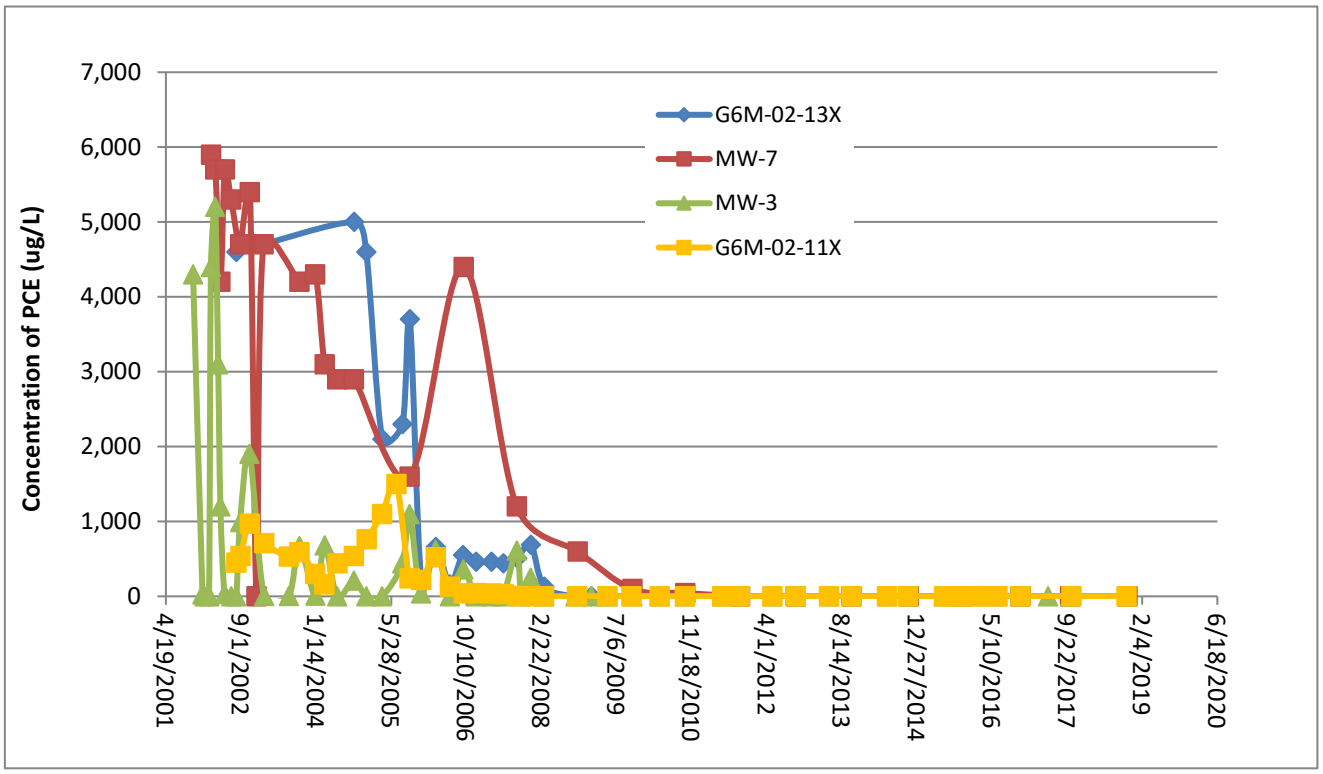


Figure 4-14
Areas 4 and 5 PCE Concentration Trend Graphs



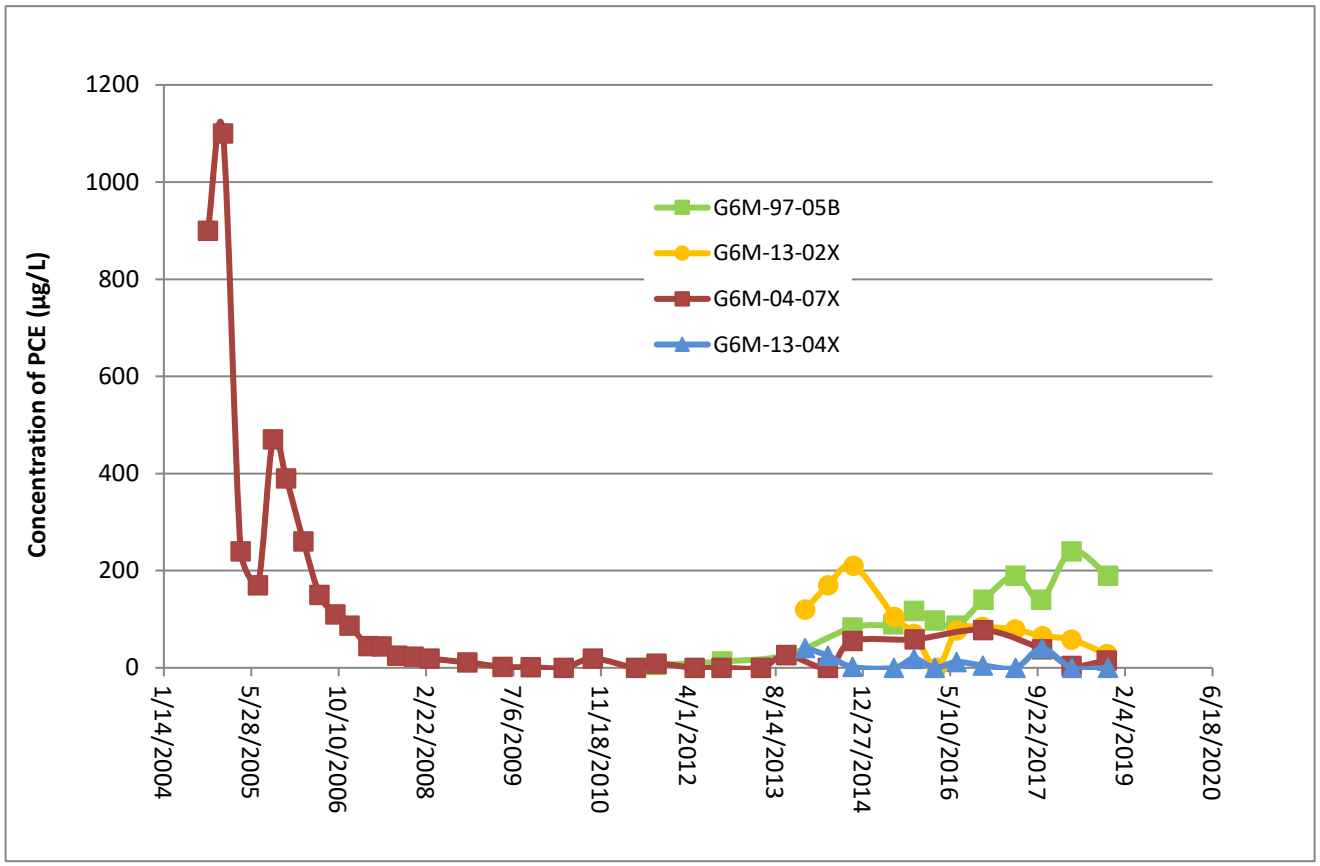
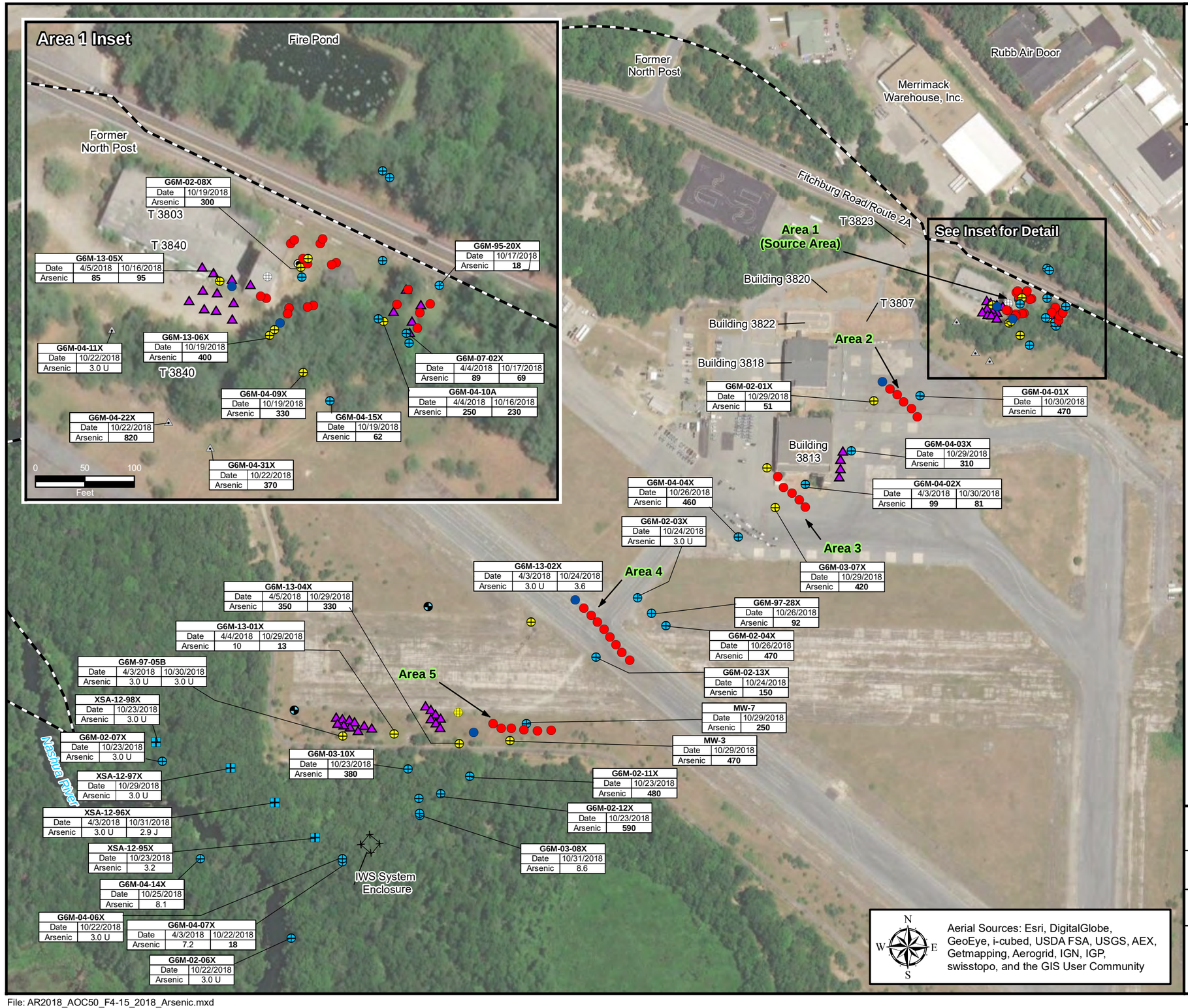


Figure 4-15
Dissolved Arsenic in Groundwater, AOC 50, 2018



Legend

- Newly Installed and Sampled Monitoring Well - 01/2019
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Geoprobe Injection Location - August 2018
- Dry Well
- Floor Drain
- Former Fort Devens Boundary

Notes:
All concentrations in micrograms per liter (µg/L)
J = Estimated Results
U = Non-detect
Arsenic Clean-Up Goal = 10 µg/L
BOLD values indicate Clean-Up Goal exceedances

ERD = Enhanced reductive dechlorination
IWS = In-well stripping
LTM = Long-term monitoring

2018 Annual Report
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Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100, Marlborough, MA 01752

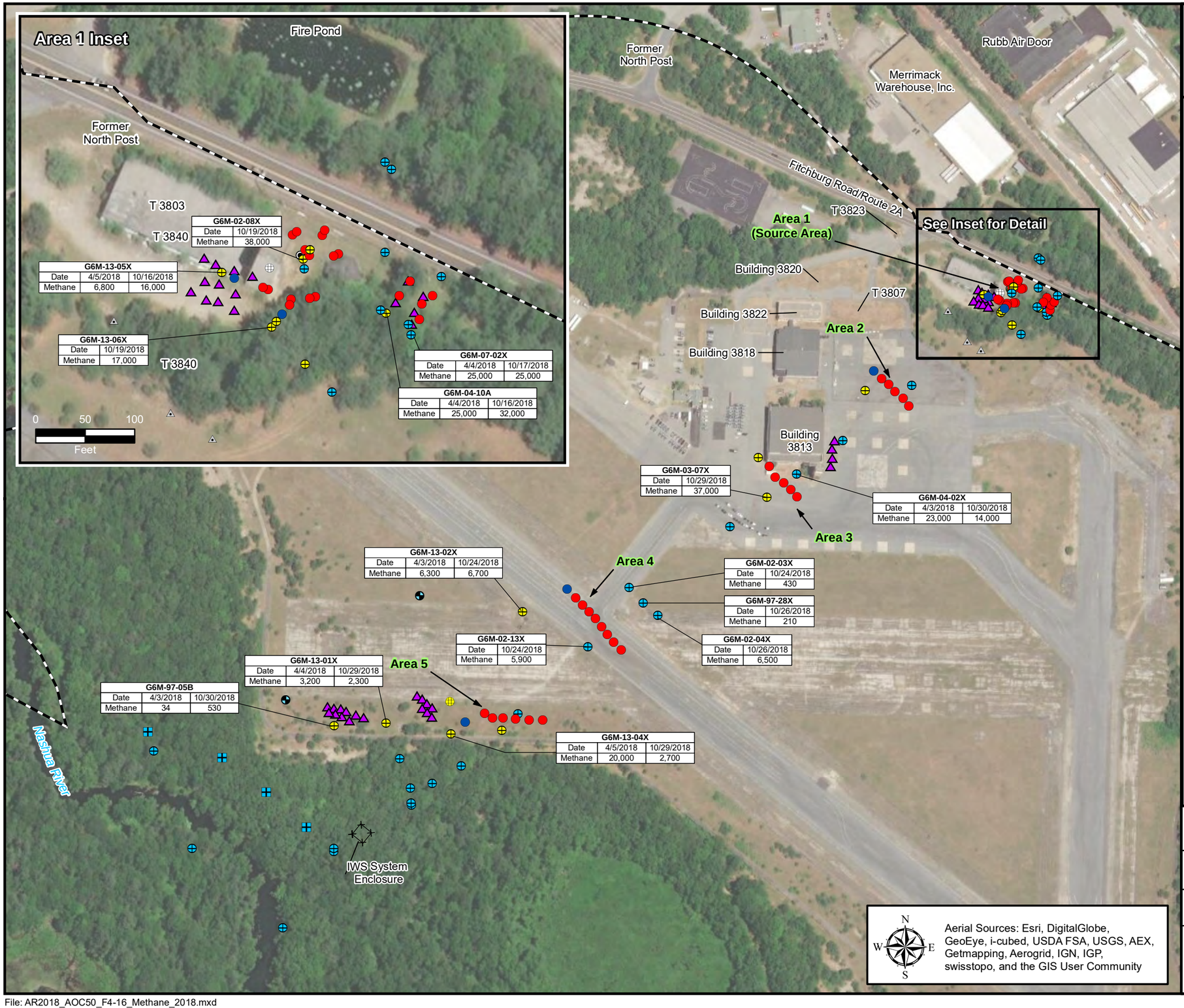
0 150 300
Feet

Date: 03/10/2020

Figure 4-15

File: AR2018_AOC50_F4-15_2018_Arsenic.mxd

Figure 4-16
Methane Concentration in Groundwater, AOC 50, 2018



Legend

- Newly Installed and Sampled Monitoring Well - 01/2019
- Geoprobe Injection Location - August 2018
- ERD LTM Well - Sampled Semi-Annually
- ERD LTM Well - Sampled Annually
- ERD LTM Well - Sampled Biennially
- Monitoring Well Converted to Injection Well
- MicroWell - Sampled Annually
- Injection Well Installed Prior to 01/2014
- Injection Well Installed 01/2014
- Dry Well
- Floor Drain
- Former Fort Devens Boundary

Notes:
All concentrations in micrograms per liter (µg/L)
J = Estimated Results
U = Non-detect

ERD = Enhanced reductive dechlorination
IWS = In-well stripping
LTM = Long-term monitoring

2018 Annual Report
AOC 50

Former Fort Devens Army Installation and Sudbury Annex
Devens, Massachusetts

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293 Boston Post Road West, Suite 100, Marlborough, MA 01752

0 150 300
Feet

Date: 03/10/2020

Figure 4-16

File: AR2018_AOC50_F4-16_Methane_2018.mxd



TABLES

Table 2-1
AOC 50 2018 ERD Injection Program
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location	Location Type	AOC 50 Area	Injection Product (and water)	Injection Volume (gal)	Injection Depth (ft bgs)*	Injection Date	FID (PPM)	PID (PPM)	Notes
Existing Injection Well Network									
IW-27	Injection Well	Area 3	ABC+Ole'	450	70 - 90	8/22/2018	56	NM	
IW-26	Injection Well	Area 3	ABC+Ole'	450	70 - 90	8/22/2018	123	NM	
IW-25	Injection Well	Area 3	ABC+Ole'	450	70 - 90	8/22/2018	22.8	NM	
IW-29	Injection Well	Area 4	ABC+Ole'	450	105 - 125	8/27/2018	NM	NM	
IW-30	Injection Well	Area 4	ABC+Ole'	450	105 - 125	8/27/2018	NM	NM	
IW-31	Injection Well	Area 4	ABC+Ole'	450	100 - 120	8/27/2018	NM	NM	
IW-32	Injection Well	Area 4	ABC+Ole'	450	95 - 115	8/27/2018	NM	NM	
IW-6	Injection Well	Area 5	ABC+Ole'	450	115 - 135	8/24/2018	148.5	NM	
IW-39	Injection Well	Area 5	ABC+Ole'	450	125 - 145	8/27/2018	131.2	NM	
G6M-02-05X	Injection Well	Area 5	ABC+Ole'	450	120 - 135	8/24/2018	322.7	NM	
DPT Injection Locations									
GP-58	DPT Injection	FDSA Area 1 - G6M-07-02X	ABC+Ole'+Fe	890	18 - 46	8/20/2018	NM	NM	
GP-59	DPT Injection		ABC+Ole'+Fe	820	18 - 46	8/21/2018	NM	NM	
GP-60	DPT Injection		ABC+Ole'+Fe	750	18 - 42	8/20/2018	NM	NM	off-set loc. Refusal
GP-61	DPT Injection		ABC+Ole'+Fe	450	18 - 46	8/20/2018	NM	NM	
GP-62	DPT Injection		ABC+Ole'+Fe	750	18 - 46	8/20/2018	NM	NM	
GP-63	DPT Injection	Area 1 - G6M-13-05X	ABC+Ole'+Fe	750	40 - 55	8/14/2018	NM	NM	Refusal.
GP-64	DPT Injection		ABC+Ole'+Fe	600	40 - 62	8/14/2018	NM	NM	Refusal.
GP-65	DPT Injection		ABC+Ole'+Fe	900	40 - 64	8/16/2018	NM	NM	
GP-66	DPT Injection		ABC+Ole'+Fe	850	40 - 64	8/15/2018	NM	NM	
GP-67	DPT Injection		ABC+Ole'+Fe	850	40 - 55	8/15/2018	NM	NM	off-set loc. Refusal
GP-68	DPT Injection		ABC+Ole'+Fe	750	40 - 62	8/17/2018	NM	NM	Refusal.
GP-69	DPT Injection		ABC+Ole'+Fe	750	40 - 64	8/15/2018	NM	NM	
GP-70	DPT Injection		ABC+Ole'+Fe	800	40 - 53	8/17/2018	NM	NM	off-set loc. Refusal
GP-71	DPT Injection		ABC+Ole'+Fe	850	40 - 60	8/16/2018	NM	NM	Refusal.
GP-72	DPT Injection		ABC+Ole'+Fe	850	40 - 64	8/15/2018	NM	NM	
GP-73	DPT Injection		ABC+Ole'+Fe	750	40 - 64	8/16/2018	NM	NM	
GP-74	DPT Injection	Area 3 - G6M-04-02X	ABC+Ole'+Fe	720	75 - 95	8/22/2018	NM	NM	off-set loc.
GP-75	DPT Injection		ABC+Ole'+Fe	840	75 - 95	8/22/2018	NM	NM	off-set loc. 2 times
GP-76	DPT Injection		ABC+Ole'+Fe	820	75 - 95	8/21/2018	NM	NM	
GP-77	DPT Injection		ABC+Ole'+Fe	750	75 - 95	8/21/2018	NM	NM	off-set loc.
GP-78	DPT Injection	Area 5 G6M-97-05B	ABC+Ole'+Fe	500	114 - 134	8/29/2018	NM	NM	
GP-79	DPT Injection		ABC+Ole'+Fe	625	114 - 134	8/28/2018	NM	NM	
GP-80	DPT Injection		ABC+Ole'+Fe	500	114 - 134	8/24/2018	NM	NM	
GP-81	DPT Injection		ABC+Ole'+Fe	695	114 - 134	8/23/2018	NM	NM	

Table 2-1
AOC 50 2018 ERD Injection Program
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location	Location Type	AOC 50 Area	Injection Product (and water)	Injection Volume (gal)	Injection Depth (ft bgs)*	Injection Date	FID (PPM)	PID (PPM)	Notes
GP-82	DPT Injection	Area 5 G6M-97-05B	ABC+Ole'+Fe	260	114 - 134	8/27/2018	NM	NM	
GP-83	DPT Injection		ABC+Ole'+Fe	530	114 - 134	8/23/2018	NM	NM	
GP-84	DPT Injection		ABC+Ole'+Fe	375	114 - 134	8/23/2018	NM	NM	
GP-85	DPT Injection		ABC+Ole'+Fe	500	114 - 134	8/24/2018	NM	NM	
GP-86	DPT Injection		ABC+Ole'+Fe	550	114 - 134	8/27/2018	NM	NM	
GP-87	DPT Injection		ABC+Ole'+Fe	575	114 - 134	9/5/2018	NM	NM	
GP-88	DPT Injection		ABC+Ole'+Fe	750	114 - 134	8/28/2018	NM	NM	
GP-89	DPT Injection		ABC+Ole'+Fe	700	114 - 134	8/29/2018	NM	NM	
GP-90	DPT Injection		ABC+Ole'+Fe	650	114 - 130	9/6/2018	NM	NM	Refusal.
GP-91	DPT Injection		ABC+Ole'+Fe	700	114 - 134	9/5/2018	NM	NM	
GP-92	DPT Injection		ABC+Ole'+Fe	600	114 - 134	9/6/2018	NM	NM	
GP-93	DPT Injection		ABC+Ole'+Fe	700	114 - 134	9/5/2018	NM	NM	
GP-94	DPT Injection		ABC+Ole'+Fe	700	114 - 134	8/30/2018	NM	NM	

Notes:

* Injection depths for injection wells refer to the screened intervals.

FID = flame ionization detector.
ft bgs = feet below ground surface.
gal = gallon.
loc. = location.
NM = not measured.
PID = photoionization detector.
PPM = parts per million.

Table 3-1
Sample Preparation and Analytical Methods, Containers, Holding Times, and Preservation
AOC 50, Former Fort Devens Army Installation, Massachusetts
Devens, MA

Parameter	Analytical Method	Contaminant of Concern	Sample Container	Preservative	Holding Times
ORGANIC					
VOCs	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

Notes:
TCL = Target Compound List.
MEE = Methane, ethane, and ethene.
As, Fe, Mn = arsenic, iron, manganese.
TOC = Total Organic Carbon.
HCL = hydrochloric acid.
HNO_3 = nitric acid.
H_2SO_4 = sulfuric acid.
NaOH = sodium hydroxide.

Table 3-2
Groundwater Level Data, Spring 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

Area	Well ID	Date	DTW (ft bTOC)	TOC Elevation (NAVD88)	GW Elevation (NAVD88)	Notes
Area 1	G6M-02-08X	4/2/2018	14.18	224.23	210.05	not used in contour map*
Area 1	G6M-04-09X	4/2/2018	31.37	242.66	211.29	--
Area 1	G6M-04-11X	4/2/2018	19.12	229.47	210.35	--
Area 1	G6M-04-15X	4/2/2018	41.97	253.23	211.26	--
Area 1	G6M-04-22X	4/2/2018	45.86	255.89	210.03	--
Area 1	G6M-04-31X	4/2/2018	45.57	255.91	210.34	--
Area 1	G6M-13-05X	4/2/2018	13.79	225.00	211.21	--
Area 1	G6M-13-06X	4/2/2018	13.37	224.37	211.00	--
Area 1	G6M-95-19X	4/2/2018	11.78	223.89	212.11	--
Area 1	G6M-95-20X	4/2/2018	11.21	224.61	213.40	--
Area 1/FDSA	G6M-04-10A	4/2/2018	12.16	224.02	211.86	--
Area 1/FDSA	G6M-04-10X	4/2/2018	12.83	224.22	211.39	--
Area 1/FDSA	G6M-04-13X	4/2/2018	13.94	225.88	211.94	--
Area 1/FDSA	G6M-07-02X	4/2/2018	13.87	225.03	211.16	--
Area 2	G6M-02-01X	4/2/2018	54.18	262.44	208.26	--
Area 2	G6M-04-01X	4/2/2018	52.03	261.15	209.12	--
Area 2	G6M-04-03X	4/2/2018	56.43	264.29	207.86	--
Area 3	G6M-03-07X	4/2/2018	56.25	262.66	206.41	--
Area 3	G6M-04-02X	4/2/2018	59.53	266.55	207.02	--
Area 3	G6M-04-04X	4/2/2018	57.21	262.66	205.45	--
Area 3	G6M-13-03X	4/2/2018	57.4	264.37	206.97	--
Area 4	G6M-02-04X	4/2/2018	59.58	264.92	205.34	--
Area 4	G6M-02-13X	4/2/2018	58.54	263.61	205.07	--
Area 4	G6M-13-02X	4/2/2018	58.74	263.82	205.08	--
Area 4	G6M-97-28X	4/2/2018	60.47	265.69	205.22	--
Area 5	G6M-02-06X	4/2/2018	6.11	209.73	203.62	--
Area 5	G6M-02-07X	4/2/2018	7.27	210.72	203.45	--
Area 5	G6M-02-11X	4/2/2018	59.48	263.93	204.45	--
Area 5	G6M-03-10X	4/2/2018	61.51	265.81	204.30	--
Area 5	G6M-04-05X	4/2/2018	53.87	258.13	204.26	--
Area 5	G6M-04-07X	4/2/2018	60.52	263.82	203.30	--
Area 5	G6M-13-01X	4/2/2018	62.45	266.85	204.40	--
Area 5	G6M-13-04X	4/2/2018	61.74	266.31	204.57	--
Area 5	G6M-97-05B	4/2/2018	63.07	268.08	205.01	not used in contour map*
Area 5	MW-7	4/2/2018	60.36	264.97	204.61	--
Area 5	XSA-12-95X	4/2/2018	68.79	269.63	200.84	not used in contour map*
Area 5	XSA-12-96X	4/2/2018	66.06	269.99	203.93	--
Area 5	XSA-12-97X	4/2/2018	70.59	270.78	200.19	not used in contour map*
Area 5	XSA-12-98X	4/2/2018	6.19	209.61	203.42	--
Nashua River	G6M-04-14X	4/2/2018	6.83	210.61	203.78	--

Notes:
* = well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
DTW = depth to water.
ft = feet.
ft bTOC = feet below TOC.
FDSA = Former Drum Storage Area.
GW = groundwater.
NAVD88 = North American Vertical Datum of 1988.
TOC = top of casing.

Table 3-3
Groundwater Level Data, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

Area	Well ID	Date	DTW (ft below TOC)	TOC Elevation (NAVD88)	GW Elevation (NAVD88)	Notes
Area 1	G6M-02-08X	10/15/2018	11.90	224.23	212.33	--
Area 1	G6M-04-09X	10/15/2018	30.87	242.66	211.79	--
Area 1	G6M-04-11X	10/15/2018	18.40	229.47	211.07	--
Area 1	G6M-04-15X	10/15/2018	41.30	253.23	211.93	--
Area 1	G6M-04-22X	10/15/2018	45.20	255.89	210.69	--
Area 1	G6M-04-31X	10/15/2018	44.83	255.91	211.08	--
Area 1	G6M-13-05X	10/15/2018	13.13	225.00	211.87	--
Area 1	G6M-13-06X	10/15/2018	12.68	224.37	211.69	--
Area 1	G6M-95-19X	10/15/2018	11.15	223.89	212.74	--
Area 1	G6M-95-20X	10/15/2018	11.53	224.61	213.08	--
Area 1/FDSA	G6M-04-10A	10/15/2018	11.85	224.02	212.17	--
Area 1/FDSA	G6M-04-10X	10/15/2018	12.15	224.22	212.07	--
Area 1/FDSA	G6M-04-13X	10/15/2018	13.25	225.88	212.63	--
Area 1/FDSA	G6M-07-02X	10/15/2018	12.14	225.03	212.89	--
Area 2	G6M-02-01X	10/15/2018	53.10	262.44	209.34	--
Area 2	G6M-04-01X	10/15/2018	51.25	261.15	209.90	--
Area 2	G6M-04-03X	10/15/2018	55.62	264.29	208.67	--
Area 3	G6M-03-07X	10/15/2018	55.28	262.66	207.38	--
Area 3	G6M-04-02X	10/15/2018	58.68	266.55	207.87	--
Area 3	G6M-04-04X	10/15/2018	56.40	262.66	206.26	--
Area 3	G6M-13-03X	10/15/2018	56.65	264.37	207.72	--
Area 4	G6M-02-03X	10/16/2018	85.05	263.03	177.98	not used in contour map*
Area 4	G6M-02-04X	10/15/2018	58.70	264.92	206.22	--
Area 4	G6M-02-13X	10/15/2018	57.65	263.61	205.96	--
Area 4	G6M-13-02X	10/15/2018	57.90	263.82	205.92	--
Area 4	G6M-97-28X	10/15/2018	59.56	265.69	206.13	--
Area 5	G6M-02-06X	10/15/2018	5.02	209.73	204.71	--
Area 5	G6M-02-07X	10/15/2018	6.24	210.72	204.48	--
Area 5	G6M-02-11X	10/15/2018	58.45	263.93	205.48	--
Area 5	G6M-02-12X	10/16/2018	57.17	262.46	205.29	--
Area 5	G6M-03-08X	10/16/2018	53.43	258.60	205.17	--
Area 5	G6M-03-10X	10/15/2018	60.52	265.81	205.29	--
Area 5	G6M-04-05X	10/15/2018	52.85	258.13	205.28	--
Area 5	G6M-04-07X	10/15/2018	59.21	263.82	204.61	--
Area 5	G6M-13-01X	10/15/2018	61.45	266.85	205.40	--
Area 5	G6M-13-04X	10/15/2018	60.72	266.31	205.59	--
Area 5	G6M-97-05B	10/15/2018	63.02	268.08	205.06	not used in contour map*
Area 5	MW-3	10/16/2018	60.25	265.75	205.50	--
Area 5	MW-7	10/15/2018	59.30	264.97	205.67	--
Area 5	XSA-12-95X	10/15/2018	66.05	269.63	203.58	not used in contour map*
Area 5	XSA-12-96X	10/15/2018	65.61	269.99	204.38	--
Area 5	XSA-12-97X	10/15/2018	65.60	270.78	205.18	--
Area 5	XSA-12-98X	10/15/2018	3.04	209.61	206.57	not used in contour map*
Nashua River	G6M-04-14X	10/15/2018	5.84	210.61	204.77	--

Notes:
* = well not used in contouring due to different vertical head compared to surrounding wells with a similar screen interval.
DTW = depth to water.
ft = feet.
ft bTOC = feet below TOC.
FDSA - Former Drum Storage Area.
GW = groundwater.
NAVD88 = North American Vertical Datum of 1988.
TOC = top of casing.

Table 4-1
Monitoring Wells Selected for 2018 Sampling Events
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location	Well ID[1]	Sampling Rationale	Well Screen Interval (ft bgs)	Well Screen Elevation (NAVD88)	Sample Parameters	Sample Frequency
Area 1	G6M-04-10A	Monitor COCs downgradient of ERD Injection Wells in the Source Area. Provide pre- injection COC and geochemistry data for ERD injection planning.	30-40	192.22-182.22	Full Suite	Semi-annual
	G6M-04-09X		55-65	187.66-177.66	VOCs and Metals	Annual
	G6M-13-06X		50-60	171.87-161.87	Full Suite	Annual
	G6M-02-08X		60-70	162.4-152.4	Full Suite	Annual
	G6M-13-05X		45-55	177.5-167.5	Full Suite	Semi-annual
Area 1	G6M-07-02X	Monitor COC trends within the Source Area.	22.5-27.5	200.33-195.33	Full Suite	Semi-annual
	G6M-04-10X		52-62	170.12-160.12	VOCs	Annual
	G6M-04-13X		30-40	193.91-183.91	VOCs	Annual
	G6M-04-15X		70-80	181.65-171.65	VOCs and Metals	Annual
	G6M-95-19X		48-58	174-164	VOCs	Annual
	G6M-95-20X		18-23	204.2-199.2	VOCs and Metals	Annual
Area 1	G6M-04-11X	Monitor COC trends and provide plume delineation downgradient of the Cesspool and Dry Well areas.	35-45	192.62-182.62	VOCs and Metals	Biennial
	G6M-04-31X		68-78	186.03-176.03	VOCs and Metals	Biennial
	G6M-04-22X		74-84	179.95-169.95	VOCs and Metals	Biennial
Area 2	G6M-02-01X	Monitor TOC and COCs downgradient of ERD Injection Wells in the Southwest Plume. Provide pre-injection COC and geochemistry data for ERD injection planning.	80-95	183-168	VOCs and Metals	Annual
Area 2	G6M-04-01X	Monitor COCs upgradient of ERD Injection Wells in the Southwest Plume.	82-92	179.69-169.69	VOCs and Metals	Annual
Area 2	G6M-04-03X	Monitor COCs downgradient of ERD Injection Wells in the Southwest Plume.	85-95	179.81-169.81	VOCs and Metals	Annual
Area 3	G6M-03-07X	Monitor TOC and COCs downgradient of ERD Injection Wells in the Southwest Plume. Provide pre-injection COC and geochemistry data for ERD injection.	80-90	182.8-172.8	Full Suite	Annual
Area 3	G6M-04-02X	Monitor COCs upgradient of ERD Injection Wells in the Southwest Plume.	80-90	183.69-174.18	Full Suite	Semi-annual
	G6M-13-03X		80-90	184.37-174.37	VOCs	Biennial
Area 3	G6M-04-04X	Monitor COCs downgradient of ERD Injection Wells in the Southwest Plume.	94-104	158.87-168.87	VOCs and Metals	Annual
Area 4	G6M-13-02X	Monitor VOCs on perimeter of Southwest Plume. Provide pre-injection COC and geochemistry data for ERD injection planning.	115-125	148.82-138.82	Full Suite	Semi-Annual
Area 4	G6M-02-13X	Monitor TOC and COCs downgradient of ERD Injection Wells in the Southwest Plume.	110-120	154-144	VOCs, Metals, and MEE	Annual

Table 4-1
Monitoring Wells Selected for 2018 Sampling Events
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location	Well ID[1]	Sampling Rationale	Well Screen Interval (ft bgs)	Well Screen Elevation (NAVD88)	Sample Parameters	Sample Frequency
Area 4	G6M-02-04X	Monitor COCs upgradient of ERD Injection Wells.	90-105	172.8-157.8	VOCs, MEE, TOC, and Metals	Annual
	G6M-02-03X*	Wells in the Southwest Plume.	90-105	173.6-158.6	VOCs, MEE, TOC, and Metals	Annual
	G6M-97-28X**		100-105	163.1-158.1	VOCs, MEE, TOC, and Metals	Annual
	G6M-18-01	Well to bound western edge of Southwest Plume.	116-126	148.58-138.58	VOCs	Baseline
Area 5	MW-3	Monitor TOC and COCs downgradient and adjacent to ERD Injection Wells in the Southwest Plume.	126-136	137.9-127.9	VOCs and Metals	Annual
	G6M-13-04X***		125-135	138.81-128.81	Full Suite	Semi-annual
Area 5	G6M-02-12X	Monitor COCs downgradient of the ERD Injection Wells within the Area 5 IRZ.	125-135	137.6-127.6	VOCs and Metals	Biennial
	G6M-02-11X		125-135	139.2-129.2	VOCs and Metals	Annual
	G6M-03-10X		120-135	143.4-128.4	VOCs and Metals	Annual
Area 5	MW-7	Monitor COCs upgradient of ERD Injection Wells in the Southwest Plume.	125-135	138.9-128.9	VOCs and Metals	Annual
Area 5	G6M-02-06X	Monitor VOCs along bank of Nashua River.	55-65	152.7-142.7	VOCs and Metals	Annual
	G6M-02-07X		30-40	178.7-168.7	VOCs and Metals	Annual
Nashua River	G6M-04-14X	Monitor VOCs and metals on the south bank of the Nashua River.	80-90	130.76-120.76	VOCs and Metals	Annual
Area 5 (Sentry)	G6M-03-08X	Monitor COCs and metals downgradient of last ERD transect of Injection Wells outside of Area 5.	125-140	131.4-116.4	VOCs and Metals	Biennial
Area 5 (IWS)	G6M-04-05X	Monitor COCs and metals downgradient of the ERD injection transects.	100-110	156.53-146.53	VOCs	Biennial
	G6M-04-07X		120-130	141.88-131.88	VOCs and Metals	Semi-annual
	G6M-04-06X		95-105	167.27-157.27	VOCs and Metals	Annual
Area 5	XSA-12-95X	Monitor geochemistry and metals crossgradient and downgradient of ERD injection wells at Area 5.	120-130	146.63-136.63	VOCs and Metals	Annual
	XSA-12-96X		120-130	147.02-137.02	VOCs and Metals	Semi-Annual
	XSA-12-97X		119.75-129.75	148.16-138.16	VOCs and Metals	Annual
	XSA-12-98X		60-70	146.64-136.64	VOCs and Metals	Annual
Area 5	G6M-97-05B	Monitor COC trends and geochemistry.	130-135	135.94-130.94	Full Suite	Semi-annual
	G6M-13-01X		125-135	139.35-129.35	Full Suite	Semi-annual
	G6M-18-02		123.95-133.95	142.69-132.69	VOCs	Basaeline

Notes:

* = G6M-02-03X is not part of the 2017 LTMMP.

** = G6M-97-28X was sampled for VOCs, MEE, TOC, and metals. The 2017 LTMMP only requires metals.

*** = G6M-13-04X was sampled for a full-suite and semi-annual. The 2017 LTMMP only required VOCs and metal and annual frequency.

"Metals" analyses includes dissolved arsenic, iron, and manganese.

"Full Suite" analyses includes VOCs, metals, nitrate/nitrite, sulfate, sulfide, alkalinity (fall only), methane, ethane, ethene, and total organic carbo

Field parameters include pH, dissolved oxygen (DO), oxidation/reduction potential (ORP), specific conductivity, turbidty, and temperature.

ft bgs = feet below ground surface.

MEE = methane, ethane, ethene.

NAVD88 = North American Vertical Datum (1988)

TOC = total organic carbon.

Table 4-2
Groundwater Analytical Results, Spring 2018
AOC 50, Former Fort Devens Army Installation, 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	pH	DO	ORP	SpC	Turbidity	Temp
Area	**Sample ID**	**Date**	**(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)**	**(SU)**	**(mg/L)**	**(mV)**	**(µS/cm)**	**(NTUs)**	**(°C)**
Area 1	G6M-13-05X-SPR18	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	641	5.92	10.27
Area 1/FDSA	G6M-04-10A-SPR18	4/4/2018	1.0 U	1.0 U	**0.89 J**	1.0 U	1.0 U	**0.60 J**	1.1 U	**3.6**	**25,000**	**250**	**98**	**2,600**	**19**	**190**	**0.17**	**11**	1.0 U	6.61	1.04	-90.7	1279	9.76	9.57
Area 1/FDSA	G6M-07-02X-SPR18	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 U	1.0 U	5.91	0.81	-69.7	652	1,700	8.99
Area 1/FDSA	G6M-DUP01-SPR18 (G6M-07-02X)	4/4/2018	**360**	**2.6**	**30**	2.0 U	2.0 U	**1.7 J**	**12**	**17**	**33,000**	**83**	**82**	**2,700**	**480**	**150**	**0.11**	10 U	1.0 U	--	--	--	--	--	--
Area 3	G6M-04-02X-SPR18	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**	1.0 U	6.34	0.96	-22.3	1139	1.90	10.93
Area 4	G6M-13-02X-SPR18	4/3/2018	**58**	**11**	**15**	**0.65 J**	1.0 U	**1.1**	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	1063	4.17	11.25
Area 5	G6M-04-07X-SPR18	4/3/2018	**4.2**	**3.4**	**7.7**	1.0 U	1.0 U	1.0 U	NA	NA	NA	**7.2**	**0.05 U**	**2,100**	NA	NA	NA	NA	NA	7.16	1.14	39.4	508	2.90	10.53
Area 5	G6M-13-01X-SPR18	4/4/2018	**3.4**	**0.99 J**	**1.2**	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	907	3.35	11.09
Area 5	G6M-13-04X-SPR18	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	1579	1.28	10.59
Area 5	G6M-97-05B-SPR18	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	671	1.13	10.87
Area 5	XSA-12-96X-SPR18	4/3/2018	**27**	**22**	**23**	**5.7**	**0.69 J**	**16**	NA	NA	NA	3.0 U	**3.2**	**4,400**	NA	NA	NA	NA	NA	7.15	1.31	-187.3	988	14.20	9.07

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
µS/cm = microsiemens per centimeter.
mg/L = milligram per liter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Cleanup Goals:

PCE = 5 µg/L, MCL
TCE = 5 µg/L, MCL
cis-1,2-DCE = 70 µg/L, MCL
1,1-DCE = 7 µg/L, MCL
VC = 2 µg/L, MCL
Arsenic = 10 µg/L, MCL
Iron = 3,129 µg/L , risk-based cleanup goal determined in the Record of Decision (ARCADIS, 2004).
Manganese = 1,460 µg/L, risk-based cleanup goal determined in the Record of Decision (ARCADIS, 2004).

Analytical Parameters

0.65	= Detection
240	= Above cleanup goal

Table 4-3
Groundwater Analytical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

			Area 1								Area 1/FDSA	
Location ID:			G6M-04-09X	G6M-13-06X	G6M-13-05X	G6M-02-08X	G6M-04-11X	G6M-04-31X	G6M-04-31X	G6M-04-22X	G6M-07-02X	G6M-07-02X
Field Sample ID:			G6M-04-09X_FAL18	G6M-13-06X_FAL18	G6M-13-05X_FAL18	G6M-02-08X_FAL18	G6M-04-11X_FAL18	G6M-04-31X_FAL18	AOC50-DUP01 FAL18	G6M-04-22X_FAL18	G6M-07-02X_FAL18	AOC50-DUP03 FAL18
Lab Sample ID:			680-159494-5	680-159494-4	680-159359-6	680-159494-2	680-159735-16	680-159735-5	680-159735-7	680-159735-4	680-159359-1	680-159359-2
Sample Date:			10/19/2018	10/19/2018	10/16/2018	10/19/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/17/2018	10/17/2018
Sample Type:			N	N	N	N	N	N	FD	N	N	FD
	Units	**ROD Cleanup Goals**										
Field Parameters												
pH	SU		6.42	6.25	4.99	6.37	6.23	6.59	NA	6.18	5.48	NA
DO	mg/L		0.81	1.5	0.45	0.35	6.24	0.2	NA	0.24	0.15	NA
ORP	mV		14.3	-61.9	87.2	111.3	206	111.5	NA	49.6	44.9	NA
SpC	mS/cm		1.315	2.131	0.973	1.439	0.254	2.999	NA	1.371	1.315	NA
Turbidity	NTU		16.8	13.2	4.83	41.6	2.65	4.49	NA	35.9	>1000	NA
Temp	°C		10.31	10.53	11.21	11.2	10.4	10.6	NA	12	10.65	NA
Anions												
Sulfate	mg/L		NA	2.00 U	5.00 U	2.00 U	NA	NA	NA	NA	**6.60 J**	10.0 U
Dissolved Gases												
Ethane	µg/L		NA	**12.0**	**4.10**	1.10 U	NA	NA	NA	NA	**14.0**	**12.0**
Ethene	µg/L		NA	**18.0**	**39.0**	1.00 U	NA	NA	NA	NA	**43.0**	**39.0**
Methane	µg/L		NA	**17000**	**16000**	**38000**	NA	NA	NA	NA	**25000**	**20000**
General Chemistry												
Alkalinity, Total (as CaCO3)	mg/L		NA	**480**	**170**	**190**	NA	NA	NA	NA	**400**	**400**
Nitrate-Nitrite (as N)	mg/L	10,000	NA	**0.180**	0.0500 U	**0.230**	NA	NA	NA	NA	**0.430 J**	**0.850 J**
Sulfide	mg/L		NA	1.00 U	1.00 U	1.00 U	NA	NA	NA	NA	1.00 U	1.00 U
Total Organic Carbon	mg/L		NA	**120**	**210**	**110**	NA	NA	NA	NA	**1300**	**1300**
Metals												
Arsenic (Dissolved)	µg/L	10	**330**	**400**	**95.0**	**300**	3.00 U	**370**	**360**	**820**	**69.0**	**71.0**
Iron (Dissolved)	µg/L	3,129	**140000**	**220000**	**66000**	**240000**	50.0 U	**60000**	**59000**	**140000**	**370000**	**390000**
Manganese (Dissolved)	µg/L	1,460	**2600**	**5300**	**15000**	**1400**	3.00 U	**6800**	**6700**	**760**	**6100**	**6400**
VOCs												
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	1.00 U	1.00 UJ	5.00 U	5.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	1.00 U	1.00 UJ	5.00 U	5.00 U
1,2-Dichloropropane	µg/L	5	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	1.00 U	1.00 UJ	5.00 U	5.00 U
Benzene	µg/L	5	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	**1.50 J**	1.00 UJ	5.00 U	5.00 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	**0.670 J**	**250**	**8.00 J**	1.00 U	1.00 U	**0.440 J**	**2.80 J**	**110**	**110**
Methylene chloride	µg/L	5	5.00 U	5.00 U	25.0 U	50.0 U	5.00 U	5.00 U	5.00 U	5.00 UJ	25.0 U	25.0 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	1.00 U	1.00 UJ	**370**	**430**
trans-1,2-Dichloroethene	µg/L	1,000*	1.00 U	1.00 U	5.00 U	10.0 U	1.00 U	1.00 U	1.00 U	1.00 UJ	5.00 U	5.00 U
Trichloroethene (TCE)	µg/L	5	1.00 U	1.00 U	**2.70 J**	10.0 U	1.00 U	**0.580 J**	**0.570 J**	1.00 UJ	**4.10 J**	**4.30 J**
Vinyl chloride	µg/L	2	1.00 U	**1.20**	**57**	10.0 U	1.00 U	1.00 U	1.00 U	**3.40 J**	**3.30 J**	**4.20 J**

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-3
Groundwater Analytical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

			Area 1/FDSA						Area 2			Area 3
Location ID:			G6M-04-10A	G6M-04-10X	G6M-04-13X	G6M-04-15X	G6M-95-19X	G6M-95-20X	G6M-02-01X	G6M-04-01X	G6M-04-03X	G6M-03-07X
Field Sample ID:			G6M-04-10A_FAL18	G6M-04-10X_FAL18	G6M-04-13X_FAL18	G6M-04-15X_FAL18	G6M-95-19X_FAL18	G6M-95-20X_FAL18	G6M-02-01X_Fal18	G6M-04-01X_Fal18	G6M-04-03X_Fal18	G6M-03-07X_Fal18
Lab Sample ID:			680-159359-3	680-159359-4	680-159494-1	680-159494-6	680-159359-7	680-159359-8	680-160018-1	680-160018-5	680-160018-6	680-160018-3
Sample Date:			10/16/2018	10/17/2018	10/19/2018	10/19/2018	10/17/2018	10/17/2018	10/29/2018	10/30/2018	10/29/2018	10/29/2018
Sample Type:			N	N	N	N	N	N	N	N	N	N
	Units	**ROD Cleanup Goals**										
Field Parameters												
pH	SU		5.51	5.2	5.02	6.21	5.43	5.84	7.48	6.48	6.78	6.54
DO	mg/L		0.72	0.26	10.4	0.12	2.08	0.13	0.17	0.55	0.57	0.27
ORP	mV		-47.2	181.2	77.8	116	246.1	154.3	-115.8	-73.1	-113	-78
SpC	mS/cm		1.243	1.534	0.162	3.171	4.601	0.426	3.07	5.152	2.944	0.795
Turbidity	NTU		346	4.23	3.31	7.49	1.99	24.9	18.2	3.01	6.82	3.12
Temp	°C		10.72	11.32	10.35	11.99	11.71	12.21	12.8	11.74	13.41	13.22
Anions												
Sulfate	mg/L		**6.50 J**	NA	NA	NA	NA	NA	NA	NA	NA	5.00 U
Dissolved Gases												
Ethane	µg/L		**0.990 J**	NA	NA	NA	NA	NA	NA	NA	NA	**2.80**
Ethene	µg/L		1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	**19.0**
Methane	µg/L		**32000**	NA	NA	NA	NA	NA	NA	NA	NA	**37000**
General Chemistry												
Alkalinity, Total (as CaCO3)	mg/L		**210**	NA	NA	NA	NA	NA	NA	NA	NA	**170**
Nitrate-Nitrite (as N)	mg/L	10,000	0.0500 UJ	NA	NA	NA	NA	NA	NA	NA	NA	**0.200**
Sulfide	mg/L		1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	1.00 U
Total Organic Carbon	mg/L		**240**	NA	NA	NA	NA	NA	NA	NA	NA	**18.0**
Metals												
Arsenic (Dissolved)	µg/L	10	**230**	NA	NA	**62.0**	NA	**18.0**	**51.0**	**470**	**310**	**420**
Iron (Dissolved)	µg/L	3,129	**140000**	NA	NA	**11000**	NA	**3500**	**3100**	**68000**	**74000**	**99000**
Manganese (Dissolved)	µg/L	1,460	**6100**	NA	NA	**5900**	NA	**170**	**2700**	**19000**	**10000**	**2100**
VOCs												
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-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 U	1.00 U	1.00 U
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70	**1.90**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**1.30**	1.00 U	**0.440 J**	**0.550 J**
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 U	5.00 U	5.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	1.00 U	**1.50**	**1.60**	**1.10**	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	1,000*	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**0.660 J**
Trichloroethene (TCE)	µg/L	5	1.00 U	1.00 U	1.00 U	**0.600 J**	1.00 U	**0.640 J**	**0.730 J**	1.00 U	**0.930 J**	1.00 U
Vinyl chloride	µg/L	2	**1.20**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**0.740 J**

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-3
Groundwater Analytical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

			Area 3				Area 4					Area 5
Location ID:			G6M-04-02X	G6M-04-02X	G6M-13-03X	G6M-04-04X	G6M-13-02X	G6M-02-13X	G6M-02-04X	G6M-02-03X	G6M-97-28X	MW-3
Field Sample ID:			G6M-04-02X_Fal18	AOC50-DUP02 Fal18	G6M-13-03X_Fal18	G6M-04-04X_FAL18	G6M-13-02X_FAL18	G6M-02-13X_FAL18	G6M-02-04X_FAL18	G6M-02-03X_FAL18	G6M-97-28X_FAL18	MW-3_Fal18
Lab Sample ID:			680-160018-14	680-160018-15	680-160018-16	680-159877-5	680-159735-1	680-159735-20	680-159877-4	680-159877-2	680-159877-3	680-160018-2
Sample Date:			10/30/2018	10/30/2018	10/30/2018	10/26/2018	10/24/2018	10/24/2018	10/26/2018	10/24/2018	10/26/2018	10/29/2018
Sample Type:			N	FD	N	N	N	N	N	N	N	N
	Units	**ROD Cleanup Goals**										
Field Parameters												
pH	SU		6.01	NA	5.01	6.44	5.79	6.53	7.12	5.72	6.33	6.8
DO	mg/L		0.9	NA	0.81	0.21	0.32	1.39	0.25	5.81	0.43	1.05
ORP	mV		-22.7	NA	-5.1	-91.7	-26.4	-40.1	-141.7	37.1	-37.8	-102
SpC	mS/cm		1.317	NA	2.618	2.529	1.217	1.26	0.741	1.931	0.817	1.211
Turbidity	NTU		0.58	NA	7.29	9.98	38.7	14.6	9.32	50.9	20.1	4.13
Temp	°C		12.12	NA	12.06	13	13.4	12.6	13.47	13.23	11.06	11.61
Anions												
Sulfate	mg/L		**9.10**	**9.00**	NA	NA	**10.0 J**	NA	NA	NA	NA	NA
Dissolved Gases												
Ethane	µg/L		1.10 U	1.10 U	NA	NA	**1.60**	**1.80**	**5.10**	1.10 U	1.10 U	NA
Ethene	µg/L		**4.10**	**3.90**	NA	NA	**1.30**	**2.80**	1.00 U	1.00 U	1.00 U	NA
Methane	µg/L		**14000**	**11000**	NA	NA	**6700**	**5900**	**6500**	**430**	**210**	NA
General Chemistry												
Alkalinity, Total (as CaCO3)	mg/L		**140**	**150**	NA	NA	**67.0**	NA	NA	NA	NA	NA
Nitrate-Nitrite (as N)	mg/L	10,000	**0.130**	**0.140**	NA	NA	**0.0950 J**	NA	NA	NA	NA	NA
Sulfide	mg/L		1.00 U	1.00 U	NA	NA	1.00 U	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L		**8.40**	**8.50**	NA	NA	**29.0 J**	NA	0.500 U	0.500 U	0.500 U	NA
Metals												
Arsenic (Dissolved)	µg/L	10	**81.0**	**79.0**	NA	**460**	**3.60**	**150**	**470**	3.00 U	**92.0**	**470**
Iron (Dissolved)	µg/L	3,129	**45000**	**40000**	NA	**110000**	**1000**	**11000**	**22000**	**180**	**9500**	**51000**
Manganese (Dissolved)	µg/L	1,460	**14000**	**13000**	NA	**21000**	**160**	**18000**	**1400**	**320**	**9500**	**8300**
VOCs												
1,1-Dichloroethene	µg/L	7	2.00 U	2.00 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
1,2-Dichloroethane	µg/L	5	2.00 U	2.00 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
1,2-Dichloropropane	µg/L	5	2.00 U	2.00 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
Benzene	µg/L	5	2.00 U	2.00 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
cis-1,2-Dichloroethene	µg/L	70	**27**	**27**	1.00 U	**0.830 J**	**24.0 J**	**1.80**	1.00 U	1.00 U	1.00 U	1.00 U
Methylene chloride	µg/L	5	10.0 U	10.0 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
Tetrachloroethene (PCE)	µg/L	5	**200**	**250**	1.00 U	1.00 U	**28.0 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	1,000*	2.00 U	2.00 U	1.00 U	**0.370 J**	**1.00 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	**64**	**72**	1.00 U	1.00 U	**9.60 J**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Vinyl chloride	µg/L	2	**3**	**2.9**	1.00 U	**0.600 J**	**3.50 J**	**1.60**	1.00 U	1.00 U	1.00 U	1.00 U

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethe.ne
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-3
Groundwater Analytical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

			Area 5									
Location ID:			G6M-13-04X	G6M-02-12X	G6M-02-11X	G6M-03-10X	MW-7	G6M-02-06X	G6M-02-07X	G6M-04-14X	G6M-03-08X	G6M-04-05X
Field Sample ID:			G6M-13-04X_Fall18	G6M-02-12X_FAL18	G6M-02-11X_FAL18	G6M-03-10X_FAL18	MW-7_Fall18	G6M-02-06X_FAL18	G6M-02-07X_FAL18	G6M-04-14X_FAL18	G6M-03-08X_Fall18	G6M-04-05X_FAL18
Lab Sample ID:			680-160018-7	680-159735-13	680-159735-15	680-159735-11	680-160018-9	680-159735-19	680-159735-17	680-159877-1	680-160018-18	680-159735-12
Sample Date:			10/29/2018	10/23/2018	10/23/2018	10/23/2018	10/29/2018	10/22/2018	10/23/2018	10/25/2018	10/31/2018	10/23/2018
Sample Type:			N	N	N	N	N	N	N	N	N	N
	Units	**ROD Cleanup Goals**										
Field Parameters												
pH	SU		6.42	7.02	6.85	6.93	6.17	7.21	7.65	7.65	6.67	6.03
DO	mg/L		0.91	0.49	0.21	0.14	0.46	5.35	0.31	0.36	1.69	0.37
ORP	mV		-53.9	-16.1	4.2	-30.2	-56.8	168.4	81.7	102.7	30.9	18.9
SpC	mS/cm		1.619	0.731	1.013	1.576	1.018	0.152	0.575	0.767	0.478	0.187
Turbidity	NTU		9.47	18.9	11.2	3.98	19.6	11.8	8.66	1.56	25	2.1
Temp	°C		11.18	11.43	11.7	11.6	12.83	11.2	11.74	12.68	10.75	10.99
Anions												
Sulfate	mg/L		**6.90**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Gases												
Ethane	µg/L		**1.80**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L		**4.40**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L		**2700**	NA	NA	NA	NA	NA	NA	NA	NA	NA
General Chemistry												
Alkalinity, Total (as CaCO3)	mg/L		**160**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-Nitrite (as N)	mg/L	10,000	**0.0550 J**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L		1.00 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L		**1.50**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Arsenic (Dissolved)	µg/L	10	**330**	**590**	**480**	**380**	**250**	3.00 U	3.00 U	**8.10**	**8.60**	NA
Iron (Dissolved)	µg/L	3,129	**23000**	**40000**	**38000**	**51000**	**20000**	50.0 U	50.0 U	50.0 U	**270**	NA
Manganese (Dissolved)	µg/L	1,460	**8700**	**7800**	**8800**	**1900**	**14000**	3.00 U	3.00 U	**1.70 J**	**7300**	NA
VOCs												
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-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 U	1.00 U	1.00 U
Benzene	µg/L	5	1.00 U	1.00 U	**0.450 J**	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	**7.70**	1.00 U	1.00 U	1.00 U	**0.950 J**	1.00 U	1.00 U	1.00 U	**0.600 J**	1.00 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 U	5.00 U	5.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	**3.40**	**1.10**	1.00 U	**1.20**
trans-1,2-Dichloroethene	µg/L	1,000*	**0.670 J**	**0.390 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
Trichloroethene (TCE)	µg/L	5	**6.90**	1.00 U	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 chloride	µg/L	2	**6.10**	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-3
Groundwater Analytical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

			Area 5								
Location ID:			G6M-04-07X	G6M-04-06X	XSA-12-95X	XSA-12-96X	XSA-12-97X	XSA-12-98X	G6M-97-05B	G6M-13-01X	G6M-13-01X
Field Sample ID:			G6M-04-07X_FAL18	G6M-04-06X_FAL18	XSA-12-95X_FAL18	XSA-12-96X_Fal18	XSA-12-97X_Fal18	XSA-12-98X_FAL18	G6M-97-05B_Fal18	G6M-13-01X_Fal18	AOC50-DUP05 Fal18
Lab Sample ID:			680-159735-8	680-159735-9	680-159735-10	680-160018-17	680-160018-4	680-159735-18	680-160018-13	680-160018-8	680-160018-10
Sample Date:			10/22/2018	10/22/2018	10/23/2018	10/31/2018	10/29/2018	10/23/2018	10/30/2018	10/29/2018	10/29/2018
Sample Type:			N	N	N	N	N	N	N	N	FD
	Units	**ROD Cleanup Goals**									
Field Parameters											
pH	SU		6.15	5.9	6.58	6.53	9.82	7.71	5.74	5.63	NA
DO	mg/L		0.28	0.53	0.21	0.38	0.34	0.25	1.29	0.46	NA
ORP	mV		33.7	51.1	-2.1	-54.7	-283	-141.6	105	-1.9	NA
SpC	mS/cm		0.538	0.246	1.198	1.221	0.682	0.948	0.758	0.975	NA
Turbidity	NTU		4.21	8.69	29.4	20.8	27.2	4.99	9.85	23.6	NA
Temp	°C		11.2	10.9	9.6	10.5	7.89	12	9.05	12.06	NA
Anions											
Sulfate	mg/L		NA	NA	NA	NA	NA	NA	**8.60**	**14.0**	**14.0**
Dissolved Gases											
Ethane	µg/L		NA	NA	NA	NA	NA	NA	1.10 U	1.10 U	1.10 U
Ethene	µg/L		NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U
Methane	µg/L		NA	NA	NA	NA	NA	NA	**530**	**2300**	**2300**
General Chemistry											
Alkalinity, Total (as CaCO3)	mg/L		NA	NA	NA	NA	NA	NA	**35.0**	**35.0**	**36.0**
Nitrate-Nitrite (as N)	mg/L	10,000	NA	NA	NA	NA	NA	NA	**0.590**	0.0500 U	0.0500 U
Sulfide	mg/L		NA	NA	NA	NA	NA	NA	1.00 U	1.00 U	1.00 U
Total Organic Carbon	mg/L		NA	NA	NA	NA	NA	NA	0.500 U	**6.70**	**4.70**
Metals											
Arsenic (Dissolved)	µg/L	10	**18.0**	3.00 U	**3.20**	**2.90 J**	3.00 U	3.00 U	3.00 U	**13.0**	**12.0**
Iron (Dissolved)	µg/L	3,129	**1500**	50.0 U	**3300**	**5100**	**2300**	50.0 U	50.0 U	**1500**	**1600**
Manganese (Dissolved)	µg/L	1,460	**4200**	**62.0**	**11000**	**10000**	**49.0**	3.00 U	**1.50 J**	**200**	**260**
VOCs											
1,1-Dichloroethene	µg/L	7	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U
Benzene	µg/L	5	2.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70	**120**	1.00 U	**11.0**	**21.0**	1.00 U	1.00 U	**9.6**	**3.60**	**3.50**
Methylene chloride	µg/L	5	10.0 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	10.0 U	5.00 U	5.00 U
Tetrachloroethene (PCE)	µg/L	5	**15**	**1.40**	**13.0**	**24.0**	**6.10**	**2.80**	**190**	**0.850 J**	**0.84**
trans-1,2-Dichloroethene	µg/L	1,000*	2.00 U	1.00 U	**2.20**	**3.20**	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	**47**	1.00 U	**5.00**	**9.10**	1.00 U	1.00 U	**16**	**1.30**	**1.40**
Vinyl chloride	µg/L	2	**4.4**	1.00 U	**1.9**	**4.70**	1.00 U	1.00 U	2.00 U	1.00 U	1.00 U

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-4
Vertical Profile Anayltical Results, Fall 2018
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location ID:			G6M-18-01	G6M-18-01	G6M-18-01	G6M-18-01	G6M-18-02	G6M-18-02	G6M-18-02	G6M-18-02	G6M-18-02	G6M-18-02
Field Sample ID:			G6M-18-01-GW-90-94	G6M-18-01-GW-110-114	G6M-18-01-GW-FD-1	G6M-18-01-GW-100-104	G6M-18-02-GW-84-88	G6M-18-02-GW-94-98	G6M-18-02-GW-104-108	G6M-18-02-GW-114-118	G6M-18-02-GW-FD-2	G6M-18-02-GW-124-128
Lab Sample ID:			680-159877-8	680-159877-11	680-159877-10	680-159877-9	680-159889-1	680-159889-2	680-159889-3	680-159889-4	680-159889-5	680-159889-6
Sample Date:			10/24/2018	10/24/2018	10/24/2018	10/25/2018	10/22/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018	10/23/2018
Sample Type:			N	N	FD	N	N	N	N	N	FD	N
Field Parameters	**Units**	**ROD Cleanup Goals**										
pH	SU		6.11	6.99	NA	6.33	6.16	5.94	6.21	6.2	NA	6.42
DO	mg/L		5.27	6.77	NA	4.25	6.28	6.12	6.22	4.54	NA	5.2
ORP	mV		60	20.4	NA	32.6	107.6	71.7	64.7	30.9	NA	17.2
SpC	mS/cm		0.076	0.114	NA	0.157	0.308	0.39	0.687	0.838	NA	0.705
Turbidity	NTU		Overrange	687	NA	Overrange	1718	625	Overrange	3322	NA	3025
Temp	^{o}C		12.19	10.98	NA	12.28	14.24	10.35	12.84	12.69	NA	12.91
VOCs												
1,1-Dichloroethene	µg/L	7	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-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 U	1.00 U	1.00 U
Benzene	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 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 U	5.00 U	5.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	1000*	1.00 U	1.00 U	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	1.00 U	1.00 U	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 chloride	µg/L	2	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolts.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal

Table 4-5
Baseline Groundwater Analytical Results, Winter 2019
AOC 50, Former Fort Devens Army Installation, Massachusetts

Location ID:			G6M-18-01	G6M-18-02
Field Sample ID:			G6M-18-01-JAN19	G6M-18-02-JAN19
Lab Sample ID:			680-163405-1	680-163405-2
Sample Date:			1/14/2019	1/14/2019
Sample Type:			N	N
	Units	**ROD Cleanup Goals**		
Field Parameters				
pH	SU		8.58	6.22
DO	mg/L		7	3.85
ORP	mV		69	137.1
SpC	mS/cm		0.166	0.722
Turbidity	NTU		3.09	3.69
Temp	^{o}C		11.6	10.74
VOCs				
1,1-Dichloroethane	µg/L	7	1.00 U	1.00 U
1,2-Dichloroethane	µg/L	5	1.00 U	1.00 U
1,2-Dichloropropane	µg/L	5	1.00 U	1.00 U
Benzene	µg/L	5	1.00 U	1.00 U
cis-1,2-Dichloroethene	µg/L	70	1.00 U	1.00 U
Methylene chloride	µg/L	5	5.00 U	5.00 U
Tetrachloroethene (PCE)	µg/L	5	1.00 U	1.00 U
trans-1,2-Dichloroethene	µg/L	1000*	1.00 U	1.00 U
Trichloroethene (TCE)	µg/L	5	1.00 U	1.00 U
Vinyl chloride	µg/L	2	1.00 U	1.00 U

Notes:

*trans-1,2-DCE does not have a cleanup goal but the MCL is 1000 µg/L.

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
DO = Dissolved Oxygen.
FDSA = Former Drum Storage Area.
J = Estimated result.
MCL = maximum contaminant level.
µg/L = microgram per liter.
mg/L = milligram per liter.
mS/cm = millisiemens per centimeter.
mV = millivolt.
NTU = Nephelometric Turbidity Unit.
NA = Not analyzed.
ORP = Oxidation-Reduction Potential.
PCE = Tetrachloroethene.
pH/SU = standard units.
ROD = Record of Decision, 2004.
SpC = Specific Conductance.
Temp/°C = Temperature/degrees Celsius.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
TCE = Trichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.

Analytical Parameters

1.3	= Detection
200	= Above cleanup goal



APPENDIX A
GROUNDWATER FIELD ANALYSIS FORMS

A.1

Spring 2018 LTM Event

Groundwater Water Level Measurement Sheet

Project/Site Name: Fort Devens/AOC50 Spring 2018 **Date :** 4/2/18

Field Team Member: MJN **Weather:** Snow

Water Level Meter Model: T = Dedicated Tubing / P = Dedicated Pump

Area	Well ID	Time	DTW (ft bTOR)	DTB (ft bTOR)	Lock Y/N	Bolts Y/N	Cap Y/N	T/P	Well Condition
Area 1	G6M-02-08X	915	14.18	71.96	✓	N/A	✓	P	
Area 1	G6M-04-09X	942	31.37	66.23	✓	N/A	✓	T	
Area 1	G6M-04-10X	934	12.83	63.50	✓	N/A	✓	T	
Area 1	G6M-04-11X	855	19.12	46.93	X	N/A	✓	T	
Area 1	G6M-04-13X	930	13.94	41.78	X	N/A	X		
Area 1	G6M-04-15X	946	41.97	81.09	✓	N/A	✓		
Area 1	G6M-04-22X	858	45.86	85.43	✓	N/A	X	T	
Area 1	G6M-04-31X	902	45.57	80.18	✓	N/A	✓		
Area 1	G6M-07-02X	938	13.87	29.89	✓	N/A	✓	P	
Area 1	G6M-13-05X	906	13.79	56.65	✓	N/A	✓		
Area 1	G6M-13-06X	910	13.37	62.10	✓	N/A	✓		
Area 1	G6M-95-19X	920	11.78	58.63	X	N/A	✓	T	
Area 1	G6M-95-20X	924	11.21	24.88	X	N/A	✓		
Area 2	G6M-02-01X	946	54.18	89.52	N/A	✓	✓	P	
Area 2	G6M-04-01X	950	52.03	90.61	N/A	✓	✓	T	
Area 2	G6M-04-03X	956	56.43	93.03	N/A	✓	✓	T	
Area 3	G6M-03-07X	1250	56.25	88.25	✓	N/A	✓	P	
Area 3	G6M-04-02X	1000	59.53	92.27	✓	N/A	✓	T	
Area 3	G6M-04-04X	1245	57.21	104.07	✓	N/A	✓	T	
Area 3	G6M-13-03X	1255	57.40	90.17	✓	✓	✓	T	
Area 4	G6M-02-04X	1240	59.58	107.04	✓	N/A	✓	T	
Area 4	G6M-02-13X	1230	58.54	119.55	✓	N/A	✓	P	
Area 4	G6M-13-02X	1225	58.74	124.89	✓	N/A	✓	T	
Area 4	G6M-97-28X	1235	60.47	107.01	✓	N/A	✓	T	
Area 5	G6M-02-06X	1259	6.11	66.75	✓	N/A	✓		
Area 5	G6M-02-07X	1305	7.27	40.42	X	N/A	✓	T	
Area 5	G6M-02-11X	1205	59.48	136.79	✓	N/A	✓	P	
Area 1	G6M-04-10A	936	12.16	42.09	✓	N/A	✓	P	

Groundwater Water Level Measurement Sheet

Project/Site Name: Fort Devens/AOC50 Spring 2018 **Date :** 4/2/18

Field Team Member: [illegible] **Weather:** Snow

Water Level Meter Model:

Area	Well ID	Time	DTW (ft bTOR)	DTB (ft bTOR)	Lock Y/N	Bolts Y/N	Cap Y/N	T/P	Well Condition
Area 5	G6M-03-10X	1050	61.51	136.74	✓	N/A	✓	P	
Area 5	G6M-04-05X	1215	53.87	112.29	✓	N/A	✓	P	
Area 5	G6M-04-07X	1320	60.52	131.81	✓	N/A	✓	P	
Area 5	G6M-13-01X	1039	62.45	136.52	✓	N/A	✓	T	
Area 5	G6M-13-04X	1045	61.74	137.34	✓	N/A	✓	T	
Area 5	G6M-97-05B	1035	63.07	137.93	✓	N/A	✓	T	
Area 5	MW-7	1220	60.36	135.10	X	N/A	✓	T	
Area 5	XSA-12-95X	1325	68.79	131.77	X	N/A	✓	P	Cannot Locate
Area 5	XSA-12-96X	1330	66.06	131.86	X	N/A	✓	T	cannot locate
Area 5	XSA-12-97X	1335	70.59	132.59	X	N/A	✓	P	cannot locate
☆ Area 5	XSA-12-98X	1340	6.19	73.10	X	N/A	✓		.5" steel well
Nashua River	G6M-04-14X	845	6.83	92.74	X	N/A	✓		Pvc too high to lock

Reference: Synoptic List compiled from Table 3 in AOC 50 LTMMP (October 2017)

☆ Micro well (.5" steel) used micro water level meter (+3" added to depth)

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: XSA-12-96X

Project: Devens AOC 50 Spring 2018 Date: 4/3/18

Location: Fort Devens Massachusetts Sampler: MA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact			✓
Well gripper present			✓
Bolts present			✓
Locked (stickup wells)			✓

Well Information

Diameter	1"
Material	Steel
Depth to water (ft BTOR)	66.06
Depth to bottom (ft BTOR)	131.86
Screen Interval (ft BTOR)	122.97 – 132.97
Total volume purged (gal)	3.0

Sampling Type

Purging Method: Micro bladder Tubing type: ~~Teflon~~ poly Dedicated pump (Y/N): Tubing

Purge start/stop time: 950 / 1015 Tubing diameter: ¼" X ¼" Air source: N

Field Instrument (Model/S/N): YSI EXO MPS 11J102411

LaMotte 2020WE 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
950	150	N/A	8.74	7.30	951	1.83	-197.6	20.9	clear
955	↓	↓	8.87	7.18	970	1.62	-195.3	15.0	↓
1000	↓	↓	9.00	7.16	986	1.35	-188.1	14.2	↓
1005	↓	↓	9.02	7.16	987	1.32	-187.6	14.3	↓
1010	↓	↓	9.07	7.15	988	1.31	-187.3	14.2	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 1.45 Dup ID/Time: N/A

Comments XSA-12-96X-SPR18 @ 1015 VOC + Diss Metals

Signature

4/3/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-04-07X

Project: Devens AOC 50 Spring 2018 Date: 4/3/18

Location: Fort Devens Massachusetts Sampler: MM

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	60.52
Depth to bottom (ft BTOR)	131.81
Screen Interval (ft BTOR)	121.94 – 131.94
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: Teflon poly Dedicated pump (Y/N): Y

Purge start/stop time: 1055/1125 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 16J102411

LaMotte 2020WE 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1055	150	60.33	10.40	7.22	492	1.77	46.6	3.21	clear
1100	↓	60.33	10.50	7.20	497	1.52	43.1	2.99	↓
1105		↓	10.51	7.18	501	1.30	41.3	2.97	
1110			10.52	7.17	503	1.17	40.9	2.94	
1115	↓		10.50	7.17	506	1.16	39.7	2.93	
1120		↓	10.53	7.16	508	1.14	39.4	2.90	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: .45 Dup ID/Time: N/A

Comments GWM-04-07X-SPR18 @1125 Full list

Signature

4/3/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-97-05B

Project: Devens AOC 50 Spring 2018 Date: 4/3/18

Location: Fort Devens Massachusetts Sampler: VG

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	63.07
Depth to bottom (ft BTOR)	137.93
Screen Interval (ft BTOR)	132.48 – 137.48
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: teflon poly Dedicated pump (Y/N): Tubing

Purge start/stop time: 1225/1300 Tubing diameter: 1/4" X 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 15102 411

LaMotte 2020wi 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1225	200	64.28	11.14	6.75	666	2.16	43.6	1.39	clear
1230		64.28	10.90	6.69	666	2.09	44.7	1.26	
1235			10.88	6.62	667	2.07	46.5	1.19	
1240			10.87	6.61	668	1.99	46.9	1.17	
1245			10.86	6.60	669	1.87	47.3	1.16	
1250			10.85	6.60	670	1.86	47.6	1.15	
1255	✓	✓	10.87	6.60	671	1.85	47.4	1.13	✓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y, .45 Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: Dup ID/Time: N/A

Comments 66M-97-05B-SPR18 @ 1300 Full list

Signature

4/3/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

KGS

Well Identification: 66M-13-02X

Project: Devens AOC 50 Spring 2018 Date: 4/3/18

Location: Fort Devens Massachusetts Sampler: [illegible]

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.74
Depth to bottom (ft BTOR)	124.89
Screen Interval (ft BGS)	115 — 125
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: teflon poly Dedicated pump (Y/N): Tubing

Purge start/stop time: 1420/1445 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 11J102411 LaMotte 2020WE 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	★ Color/Clarity
1420	200	58.88	11.28	6.50	996	1.08	-12.3	11.7	clear
1425	↓	58.88	11.29	6.50	999	0.89	-14.7	5.02	↓
1430	↓	↓	11.27	6.51	1050	0.84	-17.0	4.21	↓
1435	↓	↓	11.26	6.51	1060	0.82	-18.6	4.19	↓
1440	↓	↓	11.25	6.51	1063	0.81	-19.0	4.17	↓
[illegible]									
1[illegible]"									
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 1.45 Dup ID/Time: N/A

Comments 66M-13-02X-SPR18 @ 1445 Full list ★ During purge water was white/gray

[signature] 4/3/18

Signature Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-04-02X

Project: Devens AOC 50 Spring 2018 Date: 4/3/18

Location: Fort Devens Massachusetts Sampler: VGA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	59.53
Depth to bottom (ft BTOR)	92.27
Screen Interval (ft BTOR)	82.86 — 92.937
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: teflon poly Dedicated pump (Y/N): Tubing

Purge start/stop time: 1605/1630 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 11J102411

Wolfe 2020WP 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1605	200	59.71	11.00	6.29	1172	1.23	-3.5	2.60	clear
1610	↓	↓	10.98	6.32	1159	1.18	-16.7	2.31	↓
1615	↓	↓	10.94	6.33	1144	1.00	-20.3	2.01	↓
1620	↓	↓	10.94	6.33	1142	0.97	-21.6	1.92	↓
1625	↓	↓	10.93	6.34	1139	0.96	-22.3	1.90	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: .45 Dup ID/Time: N/A

Comments 66M-04-02X-SPR18@1630 Full list

[signature] 4/3/18

Signature Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-07-02X

Project: Devens AOC 50 Spring 2018 Date: 4/4/18

Location: Fort Devens Massachusetts Sampler: VBJ

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		✓
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	13.87
Depth to bottom (ft BTOR)	29.89
Screen Interval (ft BTOR)	24.70 → 29.70
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: Teflon poly Dedicated pump (Y/N): Y

Purge start/stop time: 825/910 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 11J 102411

LaMotte 2020WE 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
825	200	16.55	8.96	5.79	692	1.40	-37.5	>2000	white ☆
830	↓	16.48	8.97	5.80	679	1.13	-41.6	1937	↓
835		16.43	8.97	5.81	674	0.99	-57.0	1924	
840		16.47	8.98	5.90	658	0.87	-62.7	1723	
845		16.47	8.97	5.92	654	0.84	-67.8	1704	
850		16.47	8.96	5.92	653	0.83	-68.9	1702	
855	↓	16.47	8.99	5.91	652	0.81	-69.7	1700	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): (Y)/66M-DUP01-SP18 MS/MSD (Y/N): N

Filter Size: .45 Dup ID/Time: 910

Comments 66M-07-02X-SP18 @ 905 Full list

Signature

4/4/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-04-10A

Project: Devens AOC 50 Spring 2018 Date: 4/4/18

Location: Fort Devens Massachusetts Sampler: MH

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	12.16
Depth to bottom (ft BTOR)	~~42.09~~
Screen Interval (ft BTOR)	31.80 → 41.80
Total volume purged (gal)	3.0

Sampling Type

Purging Method: Bladder Pump Tubing type: Teflon poly Dedicated pump (Y/N): Y

Purge start/stop time: 1010/1035 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556 MPS 11J102411

LaMotte 2020e 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1010	200	12.05	9.28	6.57	1287	1.50	-84.8	46.5	clear
1015	↓	↓	9.59	6.63	1284	1.39	-87.6	9.80	↓
1020	↓	↓	9.37	6.62	1283	1.10	-89.9	9.78	↓
1025	↓	↓	9.56	6.62	1281	1.06	-90.1	9.77	↓
1030	↓	↓	9.57	6.61	1279	1.04	-90.7	9.76	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 1.45 Dup ID/Time: N/A

Comments 66M-04-10A-SPR18 @ 1035 Full list

MH 4/4/18

Signature Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-13-01X

Project: Devens AOC 50 Spring 2018 Date: 4/4/18

Location: Fort Devens Massachusetts Sampler: VA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	62.45
Depth to bottom (ft BTOR)	136.52
Screen Interval (ft BTOR)	127.50 → 137.50
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump Tubing type: teflon poly Dedicated pump (Y/N): Tubing

Purge start/stop time: 1210/1245 Tubing diameter: 1/4" x 1/4" Air source: N

Field Instrument (Model/S/N): YSI 556MPS 115 102411
Lamotte 2020VE 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1210	200	62.48	11.08	6.23	912	1.31	34.1	4.62	clear
1215	↓	↓	11.09	6.18	913	1.19	37.6	4.07	↓
1220	↓	↓	11.10	6.16	912	0.91	38.3	3.97	↓
1225	↓	↓	11.10	6.16	911	0.82	39.7	3.41	↓
1230	↓	↓	11.10	6.16	910	0.76	40.8	3.39	↓
1235	↓	↓	11.09	6.15	908	0.73	41.3	3.37	↓
1240	↓	↓	11.09	6.15	907	0.71	41.9	3.35	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: .45 Dup ID/Time: N/A

Comments 66M-13-01X-SPR18 @ 1245

[signature]

Signature

4/4/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-13-04X

Project: Devens AOC 50 Spring 2018 Date: 4/5/18
Location: Fort Devens Massachusetts Sampler: MA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		✓
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	61.74
Depth to bottom (ft BTOR)	137.34
Screen Interval (ft BTOR)	127.5 → 137.50
Total volume purged (gal)	5.0

Sampling Type

Purging Method: Bladder pump
Purge start/stop time: 835/905
Tubing type: Teflon only
Tubing diameter: 1/4" x 1/4"
Dedicated pump (Y/N): Tubing
Air source: N
Field Instrument (Model/S/N): YSI 556MPS 11J102411
In Name Above 2759-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
835	200	61.73	10.88	6.64	1532	1.34	-5.6	2.01	clear
840			10.69	6.65	1543	1.19	-18.7	1.47	
845			10.52	6.65	1570	1.00	-24.9	1.39	
850			10.49	6.66	1573	0.93	-28.7	1.26	
855			10.52	6.66	1578	0.91	-29.9	1.25	
900			10.59	6.66	1579	0.90	-31.2	1.28	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: .45
Duplicate (Y/N): N
Dup ID/Time: MA
MS/MSD (Y/N): Y ★

Comments 66M-13-04X-SPR18 @ 905 ★ Full list (3)

Signature

4/5/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: 66M-1305X

Project: Devens AOC 50 Spring 2018 Date: 4/5/18

Location: Fort Devens Massachusetts Sampler: WJ

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		✓
Bolts present	✓		✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	13.79
Depth to bottom (ft BTOR)	56.65
Screen Interval (ft BTOR)	47.50 – 57.50
Total volume purged (gal)	5.0

Sampling Type

Purging Method geotech Tubing type teflon poly Dedicated pump (Y/N) N

Purge start/stop time 1035/1105 Tubing diameter 1/4" Air source — N/A

Field Instrument (Model/S/N) YSI 556 MPS 11J102411

Lamotte 2757-4512

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1035	200	14.77	10.54	6.66	641	1.93	46.8	11.0	clear
1040	↓	↓	10.39	6.50	633	1.39	-18.7	9.23	↓
1045			10.30	6.44	628	1.08	-22.0	8.44	
1050			10.24	6.35	630	0.94	-21.2	5.98	
1055			10.24	6.33	640	0.90	-20.4	5.93	
1100	↓	↓	10.27	6.31	641	0.89	-20.9	5.92	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 1.45 Dup ID/Time: N/A

Comments 66M-1305X-SPR18 @ 1105 Full list

Signature

4/5/18

Date

KGS

Field Instrument Calibration Log

Date: 4/3/18 **Weather:** 30's

Project/Site Name: AOCSO **Instrument:** YSI 556MPS

Calibrated By: MA **Serial Number:** 11J102411

Parameters	Solution Expiration Date	Morning Calibration Time 700		Cal. Temperature °C	Afternoon Calibration Time 1730		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1.413 µS/cm°)	11/31/18	1.397	1.413	14.73°	1.412	1.413	14.93°	±10 µS/cm
pH (7)	10/2019	6.97	7.00		7.02	7.09		± 0.3 Ph *
pH (4)	6/31/19	4.06	4.00		4.03	4.09		± 0.3 Ph *
pH (10)	10/18	9.92	10.00		10.06	10.00		± 0.3 Ph *
ORP (240 mv)	5/22	242.6	240.0		239.2	240.0		±10 mv
Dissolved Oxygen (%)	N/A	98.7%	100.0%		101.0%	100.0%		-
Dissolved Oxygen (mg/L)	—							± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)	—							-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: N/A

Signature: [signature] **Date:** 4/3/18

KGS

Field Instrument Calibration Log

Date: 4/4/18 **Weather:** 40's rain

Project/Site Name: Devers AOC50 **Instrument:** YSI 556 MPS

Calibrated By: MA **Serial Number:** 17J102411

Parameters	Solution Expiration Date	Morning Calibration Time 700		Cal. Temperature °C	Afternoon Calibration Time 1420		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1.413 µS/cm°)	11/31/18	1.413	1.413	15.03°	1.423	1.413	14.99	±10 µS/cm
pH (7)	~~11/2019~~ 11/2019	7.00	7.00		6.97	7.00		± 0.3 Ph *
pH (4)	6/31/19	3.96	4.00		4.10	4.00		± 0.3 Ph *
pH (10)	10/18	10.01	10.00		10.02	10.00		± 0.3 Ph *
ORP (240 mv)	5/22	239.2	240.0		238.7	240.0		±10 mv
Dissolved Oxygen (%)	N/A	102.2%	100.0%		102.1%	100.0%		-
Dissolved Oxygen (mg/L)	—							± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)	—							-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: N/A

Signature: [signature] **Date:** 4/9/18

KGS

Field Instrument Calibration Log

Date: 4/5/18 **Weather:** 30's windy

Project/Site Name: AOC50 **Instrument:** YSI 556 MPS

Calibrated By: VIA **Serial Number:** 17J102411

Parameters	Solution Expiration Date	Morning Calibration Time 715		Cal. Temperature °C	Afternoon Calibration Time 1235		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1.413 µS/cm°)	11/31/18	1.420	1.413	14.87°	1.409	1.413	15.11°	±10 µS/cm
pH (7)	11/2019	6.97	7.00		7.03	7.00		± 0.3 Ph *
pH (4)	6/31/19	3.92	4.00		4.02	4.00		± 0.3 Ph *
pH (10)	10/18	10.06	10.00		9.99	10.00		± 0.3 Ph *
ORP (240 mv)	5/22	241.3	240.0		241.2	240.0		±10 mv
Dissolved Oxygen (%)	N/A	100.9%	100.0%		102.1%	100.0%		-
Dissolved Oxygen (mg/L)								± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)								-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: N/A

Signature: [signature] **Date:** 4/5/18

Turbidity Instrument Calibration Log

Project/Site Name: A0550

Instrument: LaMotte 2020wi ~~2759-4512~~

Calibrated By: MA

Serial Number: 2759-4512

Date	Pre-Cal 0 NTU AM	Post-Cal 0 NTU AM	Pre-Cal 10 NTU AM	Post-Cal 10 NTU AM	Pre-Cal 0 NTU PM	Post-Cal 0 NTU PM	Pre-Cal 10 NTU PM	Post-Cal 10 NTU PM
4/3/18	0.37	0.00	10.31	10.00	0.23	0.00	10.17	10.00
4/4/18	0.30	0.00	10.12	10.00	0.19	0.00	10.01	10.00
4/5/18	0.23	0.00	10.23	10.00	0.03	0.00	9.99	10.00

Post Calibration Criteria			
-	-	± 0.5	Variance Noted: NA

Signature: [signature]

Date: 4/5/18

A.2

Fall 2018 LTM Event

KGS

Groundwater Water Level Measurement Sheet

Project/Site Name: Fort Devens - AOC 50 **Date :** 10/15/18
Field Team Member: BrA **Weather:** Sunny 36°F
Water Level Meter Model: Heron T-Dipper

Area	Well ID	Time	DTW (ft bTOR)	DTB (ft bTOR)	Lock Y/N	Bolts Y/N	Cap Y/N	Well Condition/ Comments	Fall 2017 DTW
1	G6M-02-08X	0843	11.90	72.02	Y	N/A	Y	Ded - Micro BP	14.97
	G6M-04-09X	0758	30.87	66.35	Y	NA	Y	Ded Tubing	30.87
	G6M-04-10X	0830	12.15	63.50	Y	NA	Y	Ded Tubing (PER1)	13.97
	G6M-04-11X	0742	18.40	47.02	N	—	Y	Ded Tubing	20.14
	G6M-04-13X	0825	13.25	42.00	N	—	Y	No lock/no tubing	15.18
	G6M-04-15X	0802	41.30	81.00	Y	—	Y	no tubing	43.04
	G6M-04-22X	0806	45.20	85.53	Y	—	Y	lock + tubing	46.57
	G6M-04-31X	0807	44.83	82.40	Y	—	Y	no tubing	51.29
	G6M-07-02X	0824	12.14	29.98	Y	—	Y	Ded. micro BP	14.58
	G6M-13-05X	0748	13.13	56.70	N	—	Y	Ded tubing (PER1)	14.97
	G6M-13-06X	0754	12.68	62.13	Y	—	Y	No tubing	14.42
	G6M-95-19X	0818	11.15	58.77	N	—	Y	PER1	13.04
	G6M-95-20X	0820	11.53	24.95	N	—	Y	PER1	13.62
2	G6M-02-01X	1251	53.10	89.42	—	Y	Y	Ded BP + tubing	55.19
	G6M-04-01X	1254	51.25	90.72	—	Y	Y	Ded tubing	52.88
	G6M-04-03X	1239	55.62	93.00	—	Y	Y	Ded tubing	57.46
3	G6M-03-07X	1225	55.28	88.28	—	N	Y	Ded BP + tubing	57.70
	G6M-04-02X	1234	58.69	92.30	Y	—	Y	Ded tubing	60.67
	G6M-04-04X	1223	56.40	104.10	—	N	Y	Ded tubing	58.80
	G6M-13-03X	1230	56.65	92.80	—	Y	Y	Ded tubing	58.85
4	G6M-02-04X	1217	58.70	107.~~50~~05	Y	—	Y	Ded. tubing	61.63
	G6M-02-13X	1207	57.65	124.0	—	N	Y	Ded BP + tubing	60.73
	G6M-13-02X	1308	57.90	125.0	—	Y	Y	Ded tubing	60.96
	G6M-97-28X	1215	59.56	107.13	Y	—	Y	Need BB tubing	62.43

Area	Well ID	Time	DTW (ft bTOR)	DTB (ft bTOR)	Lock Y/N	Bolts Y/N	Cap Y/N	Well Condition	Fall 2017 DTW
5	G6M-02-06X	1324	5.02	66.92	N	–	Y	No tubing	9.37
	G6M-02-07X	1115	6.24	40.42	N	–	Y	Ded tubing. Need teflon	10.23
	G6M-02-11X	1345	58.45	136.90	Y	–	Y	Ded BP + tubing	61.97
	G6M-03-10X	1338	60.58	136.85	Y	–	Y	Ded BP + tubing	64.07
	G6M-04-05X	1333	52.85	112.40	Y	–	Y	Ded BP + tubing	56.48
	G6M-04-07X	1021	59.21	131.75	Y	–	Y	Ded BP + tubing	63.14
	G6M-13-01X	1356	61.45	136.70	Y	–	Y	Ded tubing	64.93
	G6M-13-04X	1403	60.72	137.42	N	–	Y	Ded tubing	64.25
	G6M-97-05B	1351	63.02	137.68	Y	–	Y	Ded tubing	66.64
	MW-7	1406	59.30	135.94	Y	–	Y	Ded tubg	62.64
	XSA-12-95X	1037	66.05	131.75	N	–	Y	Ded Micro BP + tubing	74.34
	~~G6M-18-01~~								na
	~~G6M-18-02~~								na
	XSA-12-96X	1040	65.61	127.01	N	–	Y	Ded tubing Need Microblade	69.57
	XSA-12-97X	1045	65.60	132.51	N	–	Y	Ded micro BP + tubing	74.28
	XSA-12-98X	1130	3.04	67.61	N	–	Y	No tubing No lock	na
Nashua River	G6M-04-14X	0927	5.84	92.80	N	–	Y	No tubing No lock	20.42

Location _____ Date _____

Project / Client _____

Well ID	Time	bTOR DTW	bTOR DTB	Notes	Ar
G6M-02-06X	1324	5.02	66.92	No tub PERI	
G6M-02-07X	1115	6.24	40.42	Ded Tub. (Med Tep) PERI	5
G6M-02-11X	1345	58.45	136.90	Ded BP, lock	
G6M-03-10X	1338	60.52	136.85	Ded BP w/ tub lock	
G6M-04-05X	1333	52.85	112.40	Ded BP w/ tub. lock	
G6M-04-07X	1021	59.21	131.75	Ded. Bladder Ring	
G6M-13-01X	1356	61.45	136.70	Ded tubing lock.	
G6M-13-04X	1403	60.72	137.42	Ded tubing	
G6M-97-05B	1351	63.02	137.68	Ded tubing Lock	
MW-7	1406	59.30	135.94	Ded tubing	
XSA-12-95X	1037	66.05	131.79	Ded Microbladder No lock (MB)	
G6M-18-01	D	N	E		
G6M-18-02					
XSA-12-96X	1040	65.61	127.01	Ded bond tub No lock (MB)	
XSA-12-97X	1045	65.60	132.5	Ded MB No lock	
XSA-12-98X	1130	3.04	67.61	No Tub No lock PERI	
G6M-04-14X	0927	5.84	92.80	No tub No lock Allow	
G6M-04-10A	0831	11.85	34.00	Ded BP PERI, ?	

Location Devens LTM-AOC50 Date 10/16/18

Project / Client

Lo-Flow Area-1

0530 At office, pack truck

0630 At SKL, N_2 tanks/ice

0645 At AOC50

Gauge G6M-02-03X

MW-3

G6M-02-12X

G6M-03-08X

Well	Time	DTW	DTB	Notes
G6M-02-12X	0723	57.17	136.39	Ded Tubing
G6M-03-08X	0732	53.43	141.75	No tub MB need
MW-3	0740	60.25	139.20	Ded B?/tub
G6M-02-03X	0748	85.05	105.20	Ded B tub bolts ✓

YSI Cal

SPC: 1449-1413 @ 18.92°C

PH7: 7.11-7.00 @ 17.72°C

PH4: 3.94-4.00 @ 17.32°C

PRO: 9.89-9.98 @ 17.24°C

DO: 74.01-100.1 @ 15.75°C

DO: 8.03-9.85 @ 15.75°C

ORP: 246.6-240.0 @ 15.78°C

Hach Cal

10NTU	9.52
20NTU	18.6
100NTU	99.2
800NTU	753

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-13-05X

Project: Devens AOC 50 Fall 2018 Date: 10/16/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)		✓	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	13.24
Depth to bottom (ft BTOR)	56.70
Screen Interval (ft BGS)	45-55 bgs
Total volume purged (gal)	2.5 gal

Sampling Type

Purging Method: Peristaltic

Purge start/stop time: 0825-0915

Tubing type: Dedicated PTef

Tubing diameter: 1/4" OD

Dedicated pump (Y/N): —

Air source: —

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0840	100	13.79	11.03	4.82	979	1.16	119.5	4.16	clear
0845	100	13.80	11.12	4.81	974	0.88	106.7	4.02	↓
0850	120	13.86	11.15	4.83	973	0.84	105.4	5.11	↓
0855	120	13.86	11.26	4.86	971	0.70	100.1	4.92	↓
0900	120	13.86	11.22	4.87	971	0.56	98.1	4.81	↓
0905	120	13.87	11.20	4.93	970	0.51	91.9	4.79	↓
0910	120	13.87	11.21	4.94	973	0.45	87.2	4.83	↓
[illegible]	F								
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: 0.45 µm Dup ID/Time: —

Comments Sample G6M-13-05X-FALL18 @ 0930 Full suite analysis

Signature

10/16/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-04-10A

Project: Devens AOC 50 Fall 2018 Date: 10/16/18

Location: Fort Devens Massachusetts Sampler: B/A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	11.79
Depth to bottom (ft BTOR)	34.00
Screen Interval (ft BGS)	30-40
Total volume purged (gal)	3.0

Sampling Type

Purging Method: Peristaltic

Purge start/stop time: 1045-1300

Tubing type: Double bonded PTef

Tubing diameter: 1/4" OD

Dedicated pump (Y/N): Micro bladder

Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G-100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1110	150	12.05	10.69	5.19	1075	1.07	18.8	424	very cloudy, milky
1115	150	12.19	10.89	5.28	1110	0.86	-11.5	388	
1120	150	12.31	10.88	5.34	1143	0.78	-34.6	401	
1125	140	12.28	11.09	5.38	1157	0.72	-49.2	419	
1130	140	12.27	11.13	5.39	1174	0.73	-51.6	417	
1135	↓	12.27	11.02	5.38	1219	0.71	-49.8	358	
1140	↓	12.26	10.96	5.41	1244	0.72	-46.0	349	
1145	↓	12.26	10.81	5.48	1241	0.71	-48.1	357	
1150	↓	12.26	10.72	5.51	1243	0.72	-47.2	346	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): Yes

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GWM-04-10A-FB418 @1215 (MS/MSD)

Signature

10/16/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM- 95-19X

Project: Devens AOC 50 Fall 2018 Date: 10/17/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)		X	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	11.13
Depth to bottom (ft BTOR)	58.77
Screen Interval (ft BGS)	48 - 58
Total volume purged (gal)	2.5

Sampling Type

Purging Method Peristaltic Tubing type PTef Dedicated pump (Y/N) —

Purge start/stop time 0730-0820 Tubing diameter 1/4" OD Air source —

Field Instrument (Model/S/N) YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0740	150	11.25	11.43	5.57	4480	3.50	243.2	8.64	clear
0745	150	11.25	11.57	5.48	4551	2.59	246.0	2.99	clear
0750	150	11.25	11.61	5.48	4560	2.64	245.1	2.41	↓
0755	↓	11.26	11.65	5.46	4579	2.59	249.0	2.07	↓
0800	↓	11.26	11.69	5.45	4592	2.74	247.8	2.06	↓
0805	↓	11.26	11.72	5.44	4596	1.90	246.5	2.01	↓
0810	↓	11.26	11.70	5.43	4613	2.10	245.8	1.98	↓
0815	↓	11.26	11.71	5.43	4601	2.05	246.1	1.99	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N) Duplicate (Y/N) — MS/MSD (Y/N) —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GWM-95-19X-FALL8 @ 0820 (VOCs only)

Signature

10/17/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-95-20X

Project: Devens AOC 50 Fall 2018 Date: 10/17/18
Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)		✓	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	11.58
Depth to bottom (ft BTOR)	24.95
Screen Interval (ft BGS)	18-23
Total volume purged (gal)	2.5

Sampling Type

Purging Method: Peristaltic Tubing type: TEFLON (Dedicated) Dedicated pump (Y/N): —
Purge start/stop time: 0840-0930 Tubing diameter: ¼" OD Air source: —
Field Instrument (Model/S/N): YSI 556MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0850	120	12.70	12.06	5.79	498	0.58	182.0	24.0	clear
0855	140	12.80	12.20	5.78	431	0.25	169.2	25.9	↓
0900	140	12.82	12.27	5.82	420	0.16	160.0	26.1	↓
0905	↓	12.82	12.26	5.83	420	0.14	156.8	25.5	↓
0910	↓	12.82	12.22	5.83	424	0.14	150.1	25.1	↓
0915	↓	12.82	12.21	5.84	426	0.13	154.3	24.9	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —
Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GWM-95-20X FALK @ 0920

Signature

10/17/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-07-02X

Project: Devens AOC 50 Fall 2018 Date: 10/17/18

Location: Fort Devens Massachusetts Sampler: BxA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	12.23
Depth to bottom (ft BTOR)	29.98
Screen Interval (ft BGS	22.5 - 27.5
Total volume purged (gal)	3.5

Sampling Type

Purging Method: Dedicated microbladder Tubing type: Double banded PTeF Dedicated pump (Y/N): yes

Purge start/stop time: 0945 - 1120 Tubing diameter: 1/4" OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0950	140	14.85	10.61	5.29	1162	0.20	138.8	>1000	very cloudy
0955	140	14.95	10.67	5.33	1200	0.16	126.5	>1000	very cloudy
1000	120	15.00	10.67	5.36	1219	0.14	118.3	>1000	↓
1005	120	15.30	10.63	5.41	1248	0.13	102.2	>1000	↓
1010	↓	15.51	10.61	5.42	1262	0.13	93.2	↓	↓
1015	↓	15.70	10.60	5.43	1275	0.13	83.1	↓	↓
1020	↓	15.80	10.59	5.44	1288	0.14	76.2	↓	↓
1025	↓	15.90	10.60	5.47	1305	0.15	53.4	↓	↓
1030	↓	16.00	10.63	5.47	1311	0.15	47.4	↓	↓
1035	↓	16.00	10.64	5.48	1312	0.15	46.9	↓	↓
1040	↓	16.20	10.65	5.48	1315	0.15	44.9	↓	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): yes MS/MSD (Y/N): —

Filter Size: 0.45 µm Dup ID/Time: 1055

AOC50-DUP03-FA18

Comments Sample G6M-07-02X-FA18 @ 1045 (FD)

Signature

10/17/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GeM-04-10X

Project: Devens AOC 50 Fall 2018 Date: 10/17/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	12.02
Depth to bottom (ft BTOR)	63.50
Screen Interval (ft BGS)	52-62
Total volume purged (gal)	2.10

Sampling Type

Purging Method: Peristaltic Tubing type: Dedicated PTFE Dedicated pump (Y/N): —

Purge start/stop time: 1135/1225 Tubing diameter: 1/4"OD Air source: —

Field Instrument (Model/S/N): YSI556MPS 09B100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1145	150	12.15	11.45	5.17	1476	0.58	168.3	14.3	clear
1150	150	12.15	11.43	5.18	1485	0.33	170.9	9.75	↓
1155	↓	↓	11.33	5.20	1495	0.29	174.3	6.41	
1200			11.31	↓	1513	0.26	177.1	3.58	
1205			11.27		1529	0.24	179.9	4.42	
1210			11.31		1532	0.25	181.0	4.15	
1215	↓	↓	11.32	↓	1534	0.26	181.2	4.23	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: — Dup ID/Time: —

Comments Sample GeM-04-10X-FALL18 @ 1220

Signature

10/17/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-02-08X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	11.96
Depth to bottom (ft BTOR)	72.02
Screen Interval (ft BGS)	60-70
Total volume purged (gal)	2.5

Sampling Type

Purging Method microbladder Tubing type Dedicated PTef Dedicated pump (Y/N) yes (micro)

Purge start/stop time 0815-0930 Tubing diameter 1/4"OD Air source Nitrogen

Field Instrument (Model/S/N) YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0835	150	14.75	11.59	6.76	1445	1.09	158.2	42.5	cloudy /
0840	"	14.76	11.53	6.71	1428	0.96	149.5	41.7	cloudy /
0845	"	14.96	11.39	6.55	1390	0.73	132.3	39.4	
0850	"	15.10	11.36	6.50	1396	0.60	130.2	38.2	
0855	"	15.19	11.30	6.48	1406	0.41	128.0	36.1	
0900	"	15.23	11.31	6.40	1441	0.36	116.6	40.7	
0905	"	15.29	11.27	6.43	1439	0.35	112.8	42.8	
0910	↓	15.32	11.20	6.37	1439	0.35	111.3	~~43~~ 41.6	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): – MS/MSD (Y/N) –

Filter Size: 0.45µm Dup ID/Time: –

Comments Sample GWM-02-08X-FALL8 @ 0920

Signature

10/19/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GeM-04-15X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18

Location: Fort Devens Massachusetts Sampler: BCA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	41.26
Depth to bottom (ft BTOR)	81.00
Screen Interval (ft BGS)	70-80
Total volume purged (gal)	2.5

Sampling Type

Purging Method: Bladder Pump Tubing type: (Lined) Double bonded PTef Dedicated pump (Y/N): —

Purge start/stop time: 1030-1120 Tubing diameter: 1/4" OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1040	150	41.35	12.00	6.41	3038	2.30	115.3	15.5	clear
1045	150	41.35	11.73	6.24	3167	1.21	124.2	9.92	↓
1050	↓	41.35	12.15	6.20	3140	0.41	122.9	7.51	↓
1055	↓	↓	11.95	6.17	3166	0.24	121.2	7.51	↓
1100	↓	↓	11.96	6.16	3164	0.14	118.7	7.48	↓
1105	↓	↓	11.98	6.16	3166	0.14	118.2	7.48	↓
1110	↓	↓	11.99	6.21	3171	0.12	116.0	7.49	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GeM-04-15X-FALL8 @ 1115 VOCs + metals (FF)

Signature

10/19/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-04-09X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18

Location: Fort Devens Massachusetts Sampler: BCA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	31.02
Depth to bottom (ft BTOR)	606.35
Screen Interval (ft BGS)	55'-65'
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Tubing type: Double banded PTef Dedicated pump (Y/N): —

Purge start/stop time: 1210-1300 Tubing diameter: 1/4" OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1225	150	31.72	10.37	6.34	1220	1.40	14.5	17.3	clear
1230	150	31.75	10.34	6.35	1230	1.11	14.1	15.2	↓
1235	↓	31.75	10.36	6.37	1248	1.10	14.2	15.0	↓
1240	↓	↓	10.37	6.41	1279	1.03	13.4	17.4	↓
1245	↓	↓	10.34	6.45	1312	0.84	15.7	16.1	↓
1250	↓	↓	10.31	6.42	1315	0.81	14.3	16.8	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GWM-04-09X-FAL18 @ 1250 VOCs + metals (FF)

Signature

10/19/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G-6M-13-06X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18

Location: Fort Devens Massachusetts Sampler: Owen Jackson

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOC)	12.72
Depth to bottom (ft BTOC)	62.35
Screen Interval (ft BGS)	50-60
Total volume purged (gal)	4

Sampling Type

Purging Method: Peristaltic Tubing type: Teflon lined poly Dedicated pump (Y/N): N

Purge start/stop time: 0815/1005 Tubing diameter: 1/4 Air source: N/A

Field Instrument (Model/S/N): YSI (15J100921)

Hach 2100Q (13110C02663)

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0855	140	12.91	10.26	6.24	2.116	2.8	-59.6	19.3	Cloudy / Yellow tint
0900	140	13.01	10.34	6.21	2112	2.7	-54.7	18.8	
0905	150	13.01	10.31	6.25	2113	2.5	-57.2	11.6	
0910		13.01	10.33	6.23	2112	2.2	-56.5	9.69	
0915		13.02	10.35	6.26	2111	2.1	-56.7	15.2	
0920		13.03	10.36	6.26	2126	2.0	-57.4	15.5	
0925		13.02	10.38	6.26	2121	2.0	-57.1	19.3	
0930		13.01	10.42	6.27	2126	1.9	-57.4	13.8	
0935		13.02	10.44	6.27	2126	1.9	-60.2	11.6	
0940		13.02	10.46	6.25	2123	1.8	-62.3	9.97	
0945		13.02	10.47	6.24	2136	1.8	-65.3	13.2	
0950	↓	13.02	10.49	6.25	2138	1.7	-66.3	11.0	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 0.45µm Dup ID/Time: N/A

Comments Sample @ 1010

Signature

10/19/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-13-06X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18
Location: Fort Devens Massachusetts Sampler: Owen Jackson

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOC)	12.72
Depth to bottom (ft BTOC)	62.35
Screen Interval (ft BGS)	50-60
Total volume purged (gal)	4

Sampling Type

Purging Method: Peristaltic
Purge start/stop time: 0815/1005
Tubing type: Teflon lined poly
Tubing diameter: 1/4"
Dedicated pump (Y/N): N
Air source: N/A
Field Instrument (Model/S/N): YSI (15J100921), Hach 2100Q (13100C029663)

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0955	150	13.02	10.51	6.25	2133	1.6	-65.6	12.2	Cloudy/Yellow tint
1000	↓	↓	10.50	6.25	2137	1.6	-62.9	12.5	↓
1005	↓	↓	10.53	6.25	2131	1.5	-61.9	13.2	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): N
Dup ID/Time: N/A
MS/MSD (Y/N): N

Comments Sample @ 1010

Signature

10/19/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-04-13X

Project: Devens AOC 50 Fall 2018 Date: 10/19/18
Location: Fort Devens Massachusetts Sampler: Owen Jackson

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present		✓	
Bolts present			✓
Locked (stickup wells)		✓	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOC)	13.24
Depth to bottom (ft BTOC)	40.31
Screen Interval (ft BGS)	30-40
Total volume purged (gal)	3

Sampling Type

Purging Method: Peristaltic
Purge start/stop time: 1110/1220
Tubing type: Teflon lined poly
Tubing diameter: 1/4"
Dedicated pump (Y/N): N
Air source: N/A
Field Instrument (Model/S/N): YSI (15J100921)
Hach 2100Q (13110C029663)

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1130	190	13.31	10.24	4.83	182	4.3	110.0	35.0	clear
1135	160	13.31	10.23	4.82	182	4.0	99.4	5.18	"
1140	"	13.30	10.23	4.82	181	4.5	95.5	4.09	"
1145	"	13.30	10.28	4.85	180	5.2	90.7	4.27	"
1150	"	13.29	10.33	4.87	178	6.0	84.3	4.24	"
1155	"	13.29	10.33	4.90	174	7.0	80.5	3.88	"
1200	"	13.29	10.30	4.91	174	6.6	74.8	3.12	"
1205	"	13.30	10.33	4.93	169	8.9	77.4	2.80	"
1210	"	13.30	10.32	4.96	166	9.7	79.4	3.02	"
1215	"	13.30	10.33	5.00	163	10.2	81.0	3.07	"
1220	"	13.30	10.35	5.02	162	10.4	77.8	3.31	"
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): N Duplicate (Y/N): N MS/MSD (Y/N): N
Filter Size: N/A Dup ID/Time: N/A

Comments Sample @ 1225

Signature

10/19/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-04-0112

Project: Devens AOC 50 Fall 2018 Date: 10/22/18
Location: Fort Devens Massachusetts Sampler: C. HAZELBROCK

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	18.48
Depth to bottom (ft BTOR)	47.63
Screen Interval (ft BGS)	35-45
Total volume purged (gal)	3.0

Sampling Type

Purging Method Low Flow Tubing type Poly Dedicated pump (Y/N) N
Purge start/stop time 1047/ Tubing diameter 1/4" Air source NA
Field Instrument (Model/S/N) Pine - Series 1 3,156

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1050	250	18.50	10.3	6.69	0.250	6.54	214.7	7.31	Clear
1100	150	19.62	10.47	6.45	0.251	6.34	214.5	4.11	"
1105	150	19.86	10.35	6.33	0.252	6.29	216.4	2.64	"
1110	150	19.92	10.34	6.30	0.252	6.23	209.3	2.81	"
1115	150	19.95	10.37	6.26	0.253	6.27	208.0	3.74	"
1120	150	20.01	10.39	6.23	0.253	6.24	208.0	3.30	"
1125	150	20.02	10.40	6.23	0.254	6.24	206.6	2.65	"
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N
Filter Size: 0.45 µm Dup ID/Time: N/A

Comments Sampled @ 1130

Signature

10/22/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGm-02-062

Project: Devens AOC 50 Fall 2018 Date: 10/22/18

Location: Fort Devens Massachusetts Sampler: G. Hazebrouck

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	5.98
Depth to bottom (ft BTOR)	66.95
Screen Interval (ft BGS)	55-65 bgs
Total volume purged (gal)	3.5

Sampling Type

Purging Method LF Tubing type Poly Dedicated pump (Y/N) N

Purge start/stop time 12:50/13:40 Tubing diameter 1/4" Air source N A

Field Instrument (Model/S/N) Pine Scientific 3156

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1255	150	5.95	11.25	6.76	0.148	7.52	185.7	Over limit	Dirty
1300		5.95	11.17	7.03	0.151	5.98	174.8	51.8	clearer
1305		5.96	11.15	7.12	0.151	5.60	173.5	132	
1310		5.97	11.09	7.15	0.150	5.60	173.2	72.0	
1315		5.98	11.16	7.22	0.150	5.42	171.6	31.6	
1320		6.00	11.22	7.20	0.151	5.48	171.0	17.0	
1325		5.99	11.18	7.22	0.152	5.40	170.4	16.9	
1330		5.99	11.16	7.23	0.152	5.37	170.5	22.3	
1335		6.00	11.14	7.24	0.152	5.57	170.0	46.5	
1340		6.00	11.18	7.26	0.152	5.55	168.8	24.5	
1345		6.00	11.16	7.26	0.152	5.70	169.0	18.6	
1350		5.99	11.20	7.21	0.152	5.35	168.4	11.8	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: .45 µM Dup ID/Time: N/A

Comments Sampled @ 1355

Signature

10/22/2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: XSA-12-95X

Project: Devens AOC 50 Fall 2018 Date: 10/23/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact			✓
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)		✓	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	66.12
Depth to bottom (ft BTOR)	131.79
Screen Interval (ft BTOR)	120-130
Total volume purged (gal)	1.5

Sampling Type

Purging Method microbladder Tubing type Bonded PTFE Dedicated pump (Y/N) Yes-micro

Purge start/stop time 0820 - 0905 Tubing diameter 1/4" OD Air source Nitrogen

Field Instrument (Model/S/N) YSI 556 MPS

Hach 21020 : 11090C012349 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0825	100	66.72	9.13	7.48	973	1.90	35.4	41.5	clear
0830	100	66.72	9.27	7.12	1016	1.80	31.4	38.4	↓
0835	↓	↓	9.52	6.77	1105	0.41	18.2	34.7	
0840			9.54	6.68	1145	0.29	9.8	32.1	
0845			9.58	6.59	1189	0.21	0.2	30.3	
0900			9.59	6.57	1196	0.21	-1.9	29.9	
0905	↓	↓	9.60	6.58	1198	0.21	-2.1	29.4	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N) — MS/MSD (Y/N) —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample XSA-12-95X-FALL18 @ 0900

BrA

Signature

10/23/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-03-10X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts

Date: 10/23/18
Sampler: B/A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	60.81
Depth to bottom (ft BTOR)	136.85
Screen Interval (ft BTOR)	120-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 0925-1020
Tubing type: Banded PTef
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): yes
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556MPS 096100702

Hach 4100 Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0940	140	60.92	10.60	6.83	1574	0.89	11.1	4.81	clear
0945	140	60.96	11.07	6.85	1577	0.57	-2.3	5.18	↓
0950	↓	60.96	11.52	6.89	1586	0.22	-12.3	4.62	↓
0955	↓	↓	11.58	6.91	1578	0.21	-18.5	4.02	↓
1000	↓	↓	11.58	6.91	1578	0.17	-22.7	4.08	↓
1005	↓	↓	11.60	6.92	1576	0.18	-26.8	3.97	↓
1010	↓	↓	11.60	6.93	1576	0.14	-30.2	3.98	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): —
Dup ID/Time: —
MS/MSD (Y/N): —

Comments Sample G6M-03-10X-FAL18 @ 1015

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Signature

10/23/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-04-05X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10/23/18
Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	53.31
Depth to bottom (ft BTOR)	112.40
Screen Interval (ft ~~BTOR~~ BS)	100-110
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 1030-1120
Tubing type: Bonded Pref
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): yes
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556 MPS 09G100702
Hach 2100 Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1050	140	53.39	10.31	6.25	214	0.77	22.1	10.7	clear
1055	140	53.39	10.89	6.17	198	0.58	19.4	2.25	↓
1100	↓	↓	10.97	6.07	188	0.44	17.4	2.14	↓
1105	↓	↓	10.99	6.05	187	0.39	18.3	2.08	↓
1110	↓	↓	10.99	6.03	187	0.37	18.9	2.10	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): N
Filter Size: —
Duplicate (Y/N): N
Dup ID/Time: —
MS/MSD (Y/N): N

Comments Sample G6M-04-05X-FALIF @ 1115 VOCs only

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Signature

10/23/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-02-12X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10/23/18
Sampler: B/A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	57.55
Depth to bottom (ft BTOR)	136.39
Screen Interval (ft BTOR)	125-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 1200-1300
Tubing type: Bonded Pref
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): —
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556MPS 09G100702
Hach 2100 Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1220	140	57.59	11.30	6.96	727	1.20	5.4	35.3	~~clear~~ / slight cloudy
1225	140	57.59	11.28	6.98	728	0.81	-2.5	32.5	slight cloudy
1230	↓	↓	11.35	6.99	728	0.60	-6.8	33.7	slight cloudy
1235	↓	↓	11.40	7.01	738	0.52	-12.6	20.3	clear
1240	↓	↓	11.42	7.02	735	0.48	-15.4	19.5	↓
1245	↓	↓	11.44	7.02	732	0.49	-15.7	19.1	↓
1250	↓	↓	11.43	7.02	731	0.49	-16.1	18.9	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): —
Dup ID/Time: —
MS/MSD (Y/N): —

Comments Sample G6M-02-12X-FAL18 @ 1300

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Signature

10/23/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-02-11X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10/23/18
Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.82
Depth to bottom (ft BTOR)	136.90
Screen Interval (ft ~~BTOR~~ BS)	125-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 1330-1415
Tubing type: Bonded PTFE
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): Yes
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556MPS 09G100702
Hach 2100Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1340	150	58.91	11.56	6.80	962	0.73	22.7	34.1	cloudy
1345	150	58.91	11.58	6.82	978	0.42	16.9	21.7	cloudy
1350	↓	↓	11.72	6.84	992	0.27	11.1	16.9	clear
1355	↓	↓	11.73	6.85	1007	0.21	6.7	12.4	↓
1400	↓	↓	11.70	6.85	1011	0.21	4.0	10.9	↓
1405	↓	↓	11.70	6.85	1013	0.21	4.2	11.2	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): N
Dup ID/Time: —
MS/MSD (Y/N): N

Comments Sample G6M-02-11X-FAL18 @ 1410

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Signature

10/23/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-02-072

Project: Devens AOC 50 Fall 2018 Date: 10/23/2018

Location: Fort Devens Massachusetts Sampler: G. Hawbrook

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present		✓	
Locked (stickup wells)		✓	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	7.22
Depth to bottom (ft BTOR)	46.5
Screen Interval (ft BGS)	30 - 40
Total volume purged (gal)	3.0

Sampling Type

Purging Method: Low Flow Tubing type: 1/4" Teflon Dedicated pump (Y/N): N

Purge start/stop time: 0842/0935 Tubing diameter: 1/4" Air source: NA

Field Instrument (Model/S/N): Rae Solo 1 3156

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0845	150	7.25	11.50	7.15	0.577	1.16	102.3	539	clear
0850	150	7.25	11.46	7.41	0.578	0.43	96.8	119	
0855	150	7.25	11.53	7.47	0.576	0.40	83.9	76.3	
0900	150	7.25	11.59	7.50	0.575	0.45	80.1	33.4	
0905	150	7.25	11.70	7.54	0.575	0.38	78.9	27.4	
0910	150	7.25	11.67	7.57	0.575	0.34	78.2	20.5	
0915	150	7.25	11.68	7.59	0.575	0.33	81.5	9.78	
0920	150	7.25	11.68	7.62	0.575	0.34	81.8	8.21	
0925	150	7.25	11.72	7.64	0.575	0.32	81.6	5.58	
0930	150	7.25	11.63	7.64	0.574	0.30	81.6	5.45	
0935	150	7.25	11.74	7.65	0.575	0.31	81.7	8.66	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 45 µm Dup ID/Time: NA

Comments Sampled @ 0940

Signature

10/23/2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: MSA-12-984

Project: Devens AOC 50 Fall 2018 Date: 10/23/2018

Location: Fort Devens Massachusetts Sampler: G. Hazebrouck

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact			X
Well gripper present	✓		
Bolts present		✓	
Locked (stickup wells)		✓	

Well Information

Diameter	12"
Material	metal
Depth to water (ft BTOR)	5.13
Depth to bottom (ft BTOR)	67.70
Screen Interval (ft BGS)	60-70
Total volume purged (gal)	3.6

Sampling Type

Purging Method: Low Flow Tubing type: 1/4" Teflon Dedicated pump (Y/N): N

Purge start/stop time: 1034/1130 Tubing diameter: 1/4" Air source: NA

Field Instrument (Model/S/N): Pine Series 3156

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1040	150	5.13	11.83	7.69	0.897	8.73	-103.5	ove range	Black
1050	150	5.14	11.96	7.78	0.952	0.41	-152.2	64.3	Clear
1055	150	5.14	11.92	7.74	0.948	0.26	-154.6	29.7	
1100	150	5.14	11.92	7.73	0.948	0.23	-157.1	25.2	
1105	150	5.14	11.94	7.73	0.948	0.24	-158.4	16.9	
1110	150	5.13	11.97	7.72	0.948	0.30	-152.5	14.0	
1115	150	5.14	11.97	7.71	0.947	0.35	-146.1	6.36	
1120	150	5.13	12.01	7.70	0.948	0.33	-141.8	5.31	
1125	150	5.14	12.01	7.70	0.948	0.27	-145.6	4.94	
1130	150	5.14	12.00	7.71	0.948	0.25	-141.6	4.44	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 45 µM Dup ID/Time: NA

Comments Sampled @ 1135

Signature

10/23/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-02-03X

Project: Devens AOC 50 Fall 2018 Date: 10/24/18

Location: Fort Devens Massachusetts Sampler: GH

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2
Material	PVC
Depth to water (ft BTOR)	56.93
Depth to bottom (ft BTOR)	
Screen Interval (ft BGS)	96-105
Total volume purged (gal)	1.4

Sampling Type

Purging Method: Bladder Tubing type: Poly Dedicated pump (Y/N): N

Purge start/stop time: 1305/1400 Tubing diameter: 1/4" Air source: Nitrogen

Field Instrument (Model/S/N): Pine Scientific 3156

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1320	100		13.56	6.26	1.851	8.68	34.1	210	
1325	100		13.36	6.00	1.912	8.27	35.8	146	
1330	100		13.44	5.93	1.914	7.68	35.6	88.7	
1335	100		13.65	5.84	1.910	6.75	35.6	52.7	
1340	100		13.71	5.78	1.911	5.97	36.0	56.1	
1345	100		13.73	5.77	1.912	5.96	36.1	49.0	
1350	100		13.72	5.72	1.936	5.40	36.9	49.5	
1355	100		13.23	5.72	1.931	5.05	37.1	50.9	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y Duplicate (Y/N): Y MS/MSD (Y/N): N

Filter Size: 45 µl Dup ID/Time: NA

Comments Sample @ 1400

Signature

10/24/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-13-02X

Project: Devens AOC 50 Fall 2018 Date: 10/24/2018

Location: Fort Devens Massachusetts Sampler: BA

Well Integrity

	Yes	No	N/A
Casing Secure	X		
Concrete Pad intact	X		
PVC casing intact	X		
Well gripper present	X		
Bolts present	X		
Locked (stickup wells)	X		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.10
Depth to bottom (ft BTOR)	125.00
Screen Interval (ft BTOR)	115-125 bgs
Total volume purged (gal)	2.5

Sampling Type

Purging Method: Bladder

Purge start/stop time: 0815/1030

Tubing type: teflon lined

Tubing diameter: 0.25 in

Dedicated pump (Y/N): Yes, 0.25 inch teflon

Air source: nitrogen

Field Instrument (Model/S/N): YSI/09G100702 Hach/

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0830	140	58.12	13.13	5.47	1108	1.94	1.6	125	cloudy
0835	140	58.12	13.43	5.51	1123	0.61	-12.4	65.2	
0840	140	58.12	13.43	5.58	1129	0.58	-13.7	65.0	
0845	140	58.12	13.43	5.62	1137	0.53	-14.3	64.9	
0850	140	58.12	13.43	5.63	1158	0.51	-16.1	64.5	
0855	140	58.12	13.43	5.70	1194	0.44	-21.9	43.6	
0900	140	58.12	13.43	5.72	1301	0.39	-22.1	41.2	
0905	140	58.12	13.43	5.78	1228	0.35	-25.5	39.9	
0910	140	58.12	13.43	5.79	1217	0.32	-26.4	38.7	
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Yes

Filter Size: 0.45

Duplicate (Y/N): No

Dup ID/Time: No

MS/MSD (Y/N): Yes

Comments: Sample collected at 0915. Full Suite.

Brett Anchukaitis

Signature

10/24/2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-04-14X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10/25/18
Sampler: Melissa Miller

Well Integrity

	Yes	No	N/A
Casing Secure		X	
Concrete Pad intact			X
PVC casing intact	X		
Well gripper present	X		~~X~~
Bolts present			X
Locked (stickup wells)		X	

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	6.72
Depth to bottom (ft BTOR)	92.80
Screen Interval (ft ~~BTOR~~ GS)	80-90
Total volume purged (gal)	4.25

Screen set @ 90 ft BTOR

Sampling Type

Purging Method: Peripump
Purge start/stop time: 0940/1035
Tubing type: Teflon lined
Tubing diameter: 1/4"
Dedicated pump (Y/N): N
Air source: NA
Field Instrument (Model/S/N): HACH 2100A (13110C029663)
YSI 556 MPS (09G100702)

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (mS/cm)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1000	200	7.20	12.76	7.14	0.777	0.62	158.6	14.9	Clear
1005	175	7.10	12.73	7.48	0.767	0.38	130.8	7.99	Clear
1010	150	6.80	12.63	7.56	0.766	0.36	120.6	3.72	clear
1015	150	6.80	12.71	7.62	0.766	0.36	109.2	1.49	Clear
1020	150	6.81	12.70	7.63	0.767	0.36	103.1	1.53	Clear
1025	150	6.80	12.64	7.63	0.767	0.36	103.0	1.54	Clear
1030	150	6.81	12.68	7.65	0.767	0.36	102.7	1.56	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

G6M-04-14X_FAL18 @ 1035

Sampling Details

Field Filtered (Y/N): Y
Filter Size: .45 um
Duplicate (Y/N): N
Dup ID/Time: N/A
MS/MSD (Y/N): N

Comments

[signature]
Signature

10/25/18
Date

MJ
KL

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: [illegible]

Project: Devens AOC 50 Fall 2018 Date: 10/25/18
Location: Fort Devens Massachusetts Sampler: C.H

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.94
Depth to bottom (ft BTOR)	109.05
Screen Interval (ft BTOR)	90-105
Total volume purged (gal)	3.5

Sampling Type

Purging Method Bladder Tubing type TeFlon Dedicated pump (Y/N)
Purge start/stop time 0915/1036 Tubing diameter 1/4" Air source N
Field Instrument (Model/S/N) Pro Series 1 3256

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0955	100		12.55	7.24	0.957	1.55	-106.1	50.7	Reddish
1000	100		12.56	7.22	0.986	1.06	-107.2	35.5	↓
1005	100		12.60	7.21	1.0141	0.87	-107.6	32.3	↓
1010	100		12.61	7.21	1.0149	0.66	-109.4	20.7	clear
1015	100		12.63	7.26	1.089	0.41	-107.1	17.7	↓
1020	100		12.64	7.19	1.134	0.33	-107.2	16.9	↓
1025	100		12.68	7.17	1.149	0.35	-107.4	17.1	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): N MS/MSD (Y/N): N
Filter Size: 45 µm Dup ID/Time: N/A

Comments Although purge began at 0915, no significant amount of water had purged until 0955 due to equipment issues. Sample @ 1055

Signature

10/25/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-97-28X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: ~~10/25/18~~ 10/26/18
Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	59.78
Depth to bottom (ft BTOR)	107.13
Screen Interval (ft BTOR)	100-105
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 0755-0910
Tubing type: Bonded PTFE
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): No
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556MPS 09G100702
Hach 2100Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0815	150	59.81	11.42	5.96	789	1.04	50.2	59.9	cloudy
0820	150	59.81	11.35	6.00	794	0.92	45.1	58.7	cloudy
0825	↓	↓	11.30	6.09	800	0.87	35.3	42.1	cloudy
0830			11.21	6.27	805	0.61	-8.7	38.7	cloudy
0835			11.10	6.32	809	0.49	-26.4	23.1	cloudy
0840			11.10	6.32	809	0.48	-30.9	27.8 21.8 BrA	cloudy
0845			11.09	6.33	811	0.45	-35.2	20.9	clear
0850	↓	↓	11.06	6.33	817	0.43	-37.8	20.1	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): N
Filter Size: 0.45µm
Duplicate (Y/N): —
Dup ID/Time: —
MS/MSD (Y/N): —

Comments Sample G6M-97-28X-FALL8 @ 0900

Signature

10/26/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GeM-02-04X

Project: Devens AOC 50 Fall 2018 Date: 10/26/18

Location: Fort Devens Massachusetts Sampler: B.A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.90
Depth to bottom (ft BTOR)	107.65
Screen Interval (ft BTOR)	90-105
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump Tubing type: Bonded Pict Dedicated pump (Y/N): —

Purge start/stop time: 1000-1100 Tubing diameter: 1/4" OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS

HACH 2100Q : 11090C012349 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1015	150	59.01	12.93	6.79	604	0.55	-94.8	12.3	clear
1020	150	59.01	13.07	6.94	619	0.42	-109.7	10.2	
1025	↓	↓	13.15	7.06	675	0.38	-123.7	9.48	
1030			13.23	7.07	697	0.33	-124.8	9.51	
1035			13.39	7.09	720	0.26	-127.0	9.42	
1040			13.75	7.12	738	0.25	-136.1	9.39	
1045			13.74	7.13	740	0.25	-140.2	9.38	
1050	↓	↓	13.47	7.12	741	0.25	-141.7	9.32	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GeM-02-04X-FA-18 @ 1055

Signature

10/26/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-04-04X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts

Date: 10/26/18
Sampler: B/A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present		✓	
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	56.38
Depth to bottom (ft BTOR)	104.10
Screen Interval (ft ~~BTOR~~)	94-104
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 1150-1240
Tubing type: Bonded PTCF
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): —
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556 MPS 09G100702
Hach 2100 Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1200	140	56.44	13.05	6.78	2407	0.59	-99.7	15.1	clear
1205	140	56.44	13.07	6.66	2497	0.29	-100.9	13.7	↓
1210	↓	↓	13.08	6.56	2519	0.22	-97.5	11.1	↓
1215	↓	↓	13.03	6.47	2536	0.20	-93.1	10.4	↓
1220	↓	↓	12.98	6.45	2528	0.19	-92.0	10.0	↓
1225	↓	↓	13.00	6.44	2529	0.21	-91.7	9.98	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): —
Dup ID/Time: —
MS/MSD (Y/N): —

Comments Sample G6M-04-04X-FAL18 @ 1230

[signature]
Signature

10/26/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GbM-13-04X

Project: Devens AOC 50 Fall 2018 Date: 10/29/18

Location: Fort Devens Massachusetts Sampler: B&A

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	60.75
Depth to bottom (ft BTOR)	137.42
Screen Interval (ft BTOR)	125-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump Tubing type: Bonded PTFE Dedicated pump (Y/N): –

Purge start/stop time: 0900-1000 Tubing diameter: 1/4"OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Hach 2100 Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0915	120	60.92	10.84	6.51	1516	2.28	-33.0	28.4	cloudy
0920	120	61.01	10.92	6.50	1537	1.91	-32.9	20.3	cloudy
0925	↓	60.92	10.99	6.47	1569	1.45	-34.9	12.4	clear
0930		60.92	11.03	6.46	1587	1.53	-36.3	9.61	clear
0935		↓	11.05	6.45	1599	1.20	-37.2	9.56	↓
0940			11.08	6.44	1601	1.03	-38.9	9.48	
0945			11.17	6.42	1617	0.86	-53.1	9.50	
0950			11.18	6.42	1619	0.90	-54.2	9.51	
0955	↓	↓	11.18	6.42	1619	0.91	-53.9	9.47	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): – MS/MSD (Y/N): –

Filter Size: 0.45 µm Dup ID/Time: –

Comments Sample GbM-13-04X-FALL8 @ 0955

Signature

10/29/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-13-01X

Project: Devens AOC 50 Fall 2018 Date: 10/29/18

Location: Fort Devens Massachusetts Sampler: B/A

Well Integrity

	Yes	No	N/A
Casing Secure	~		
Concrete Pad intact			~
PVC casing intact	~		
Well gripper present	~		
Bolts present			~
Locked (stickup wells)	~		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	61.75
Depth to bottom (ft BTOR)	136.70
Screen Interval (ft BTOR)	125-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump Tubing type: Bonded PTFE Dedicated pump (Y/N): —

Purge start/stop time: 1120-1250 Tubing diameter: 1/4"OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Hach 2100Q: 11090C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1140	150	61.85	11.92	5.99	1011	1.56	-1.2	68.7	cloudy
1145	150	61.85	11.90	5.80	990	0.84	-1.6	59.1	cloudy
1150	↓	↓	11.99	5.66	979	0.58	-3.0	56.9	cloudy
1155			12.03	5.64	977	0.52	-3.0	25.3	cloudy
1200			12.04	5.63	977	0.47	-2.9	24.9	cloudy
1205			12.05	5.62	977	0.45	-2.5	24.3	↓
1210			12.05	5.62	976	0.46	-2.0	23.7	
1215	↓	↓	12.06	5.63	975	0.46	-1.9	23.6	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): Yes MS/MSD (Y/N): —

Filter Size: 0.45µm Dup ID/Time: AOC50-DUP05_FALL8 @ 1230

Comments Sample G6M-13-01X-FALL8 @ 1220

Signature

10/29/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: MW-7

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10/29/18
Sampler: BCA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	59.48
Depth to bottom (ft BTOR)	135.94
Screen Interval (ft ~~BTOR~~ BS)	125-135
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump
Purge start/stop time: 1417-1500
Tubing type: Bonded PTef
Tubing diameter: 1/4" OD
Dedicated pump (Y/N): —
Air source: Nitrogen
Field Instrument (Model/S/N): YSI 556MPS 096100702
HACH 2100Q: 1109 0C012349

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1425	140	59.67	12.90	6.14	964	1.20	-23.3	35.9	cloudy
1430	140	59.67	12.74	6.12	995	0.75	-39.7	32.1	cloudy
1435	↓	59.67	12.70	6.15	1014	0.46	-55.3	24.6	clear
1440	↓	↓	12.78	6.16	1017	0.46	-56.4	20.7	↓
1445	↓	↓	12.80	6.16	1018	0.46	-56.6	19.4	↓
1450	↓	↓	12.83	6.17	1018	0.46	-56.8	19.6	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): N
Dup ID/Time: —
MS/MSD (Y/N): N

Comments Sample MW-7 @ 1455

[signature]
Signature

10/29/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-03-07X

Project: Devens AOC 50 Fall 2018 Date: 10.29.2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present		✓	
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	55.20'
Depth to bottom (ft BTOR)	[illegible] 90'
Screen Interval (ft BGS)	80-90'
Total volume purged (gal)	3.14

Sampling Type

Purging Method Bladder Tubing type Teflon Dedicated pump (Y/N)

Purge start/stop time 1150 / 1325 Tubing diameter 1/4" Air source Nitrogen

Field Instrument (Model/S/N) YSI 556 / 06142823AL | HACH 2100Q / 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1200	125	55.24'	13.32	6.58	233	0.84	-47.5	5.37	Clear
1205	125	55.24'	13.43	6.53	242	0.78	-49.4	4.17	Clear
1210	125	55.25'	13.48	6.50	397	0.68	-45.9	2.59	Clear ; Amber Tint
1215	125	55.25'	13.54	6.52	502	0.65	-62.0	2.07	Clear ; Amber Tint
1220	125	55.25'	13.47	6.53	631	0.66	-72.8	1.74	Clear ; Amber Tint
1225	125	55.25'	13.41	6.55	686	0.62	-76.9	1.67	Clear ; Amber Tint
1230	125	55.25'	13.33	6.55	725	0.55	-78.5	1.87	Clear ; Amber Tint
1235	125	55.25'	13.25	6.54	746	0.97	-80.6	2.31	Clear ; Amber Tint.
1240	125	55.25'	13.22	6.54	762	0.40	-80.7	2.62	Clear ; Amber Tint
1245	125	55.25'	13.21	6.54	780	0.33	-80.9	2.95	Clear ; Amber Tint.
1250	125	55.26'	13.22	6.54	790	0.28	-78.2	3.06	Clear ; Amber Tint.
1255	125	55.27'	13.22	6.54	796	0.27	-78.0	3.12	Clear ; Amber Tint.
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): metals. Duplicate (Y/N): Y MS/MSD (Y/N): N

Filter Size: 45 µm Dup ID/Time: DUP / 1255

Comments Sample @ 1255

Signature

10.29.2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: MW-3

Project: Devens AOC 50 Fall 2018 Date: 10.29.2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	60.42'
Depth to bottom (ft BTOR)	~~135.57'~~ 136'
Screen Interval (ft BGS)	126-136'
Total volume purged (gal)	1.98

Sampling Type

Purging Method Bladder Tubing type Teflon Dedicated pump (Y/N)

Purge start/stop time 1016/1105 Tubing diameter 1/4" Air source Nitrogen

Field Instrument (Model/S/N)

YSI 556 / 06142823AL | HACH 2100Q / 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1020	125	60.45'	11.35	7.21	1,143	2.92	-81.7	8.09	Clear
1025	125	60.45'	11.53	6.98	1173	1.24	-88.8	5.51	Clear
1030	125	60.47'	11.68	6.91	1187	0.80	-95.4	3.77	Clear
1035	125	60.47'	11.82	6.88	1199	1.83	-100.6	2.88	Clear
1040	125	60.47'	11.83	6.87	1207	1.84	-100.0	8.01	Clear
1045	125	60.48'	11.82	6.86	1209	1.53	-101.5	5.72	Clear
1050	125	60.48'	11.72	6.85	1207	1.25	-101.3	5.12	Clear
1055	125	60.47'	11.70	6.82	1210	1.00	-101.7	4.28	Clear
1100	125	60.48'	11.65	6.79	1210	1.02	-101.9	4.00	Clear
1105	125	60.47'	11.61	6.80	1211	1.05	-102.0	4.13	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): N/A Duplicate (Y/N): Y MS/MSD (Y/N): Y

Filter Size: 45 µm Dup ID/Time: N/A

Comments Sampled @ 1105

Signature

10.29.2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GWM-02-01X

Project: Devens AOC 50 Fall 2018 Date: 10/29/2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	52.99'
Depth to bottom (ft BTOR)	95'
Screen Interval (ft BGS)	80-95'
Total volume purged (gal)	1.39

Sampling Type

Purging Method: Bladder Tubing type: Teflon Dedicated pump (Y/N):

Purge start/stop time: 0960 / 0915 Tubing diameter: 1/4" Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 / 06H282234 | HACH 2100Q / 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0855	150	53.09	12.98	7.50	2.987	0.14	-136.2	52.7	Clear
0900	150	53.09	12.81	7.48	3.049	0.14	-117.7	33.1	Clear
0905	150	53.10	12.77	7.49	3.061	0.14	-116.5	18.3	Clear
0910	150	53.10	12.77	7.49	3.068	0.15	-116.4	18.4	Clear
0915	150	53.11	12.80	7.48	3.070	0.17	-115.8	18.2	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): metals only Duplicate (Y/N): Duplicate (Y/N):

Filter Size: 45 µm Dup ID/Time: N/A

Comments Sampled 0915

Signature

10-29-2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GEM-97-05B

Project: Devens AOC 50 Fall 2018 Date: 10/30/18

Location: Fort Devens Massachusetts Sampler: OS / BA (Field Parameters)

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	63.35
Depth to bottom (ft BTOR)	137.68
Screen Interval (ft ~~BTOR~~)	130-135
Total volume purged (gal)	1.5

Sampling Type

Purging Method: Bladder Pump

Purge start/stop time: 0755-0840

Tubing type: Barrier Ptef.

Tubing diameter: 1/4" OD

Dedicated pump (Y/N): —

Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 MPS 09G100702

Hach 2100 Q

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0810	120	63.40	9.27	5.95	758	1.36	37.2	25.1	cloudy
0815	120	63.40	9.33	5.40	755	1.38	40.1	24.9	cloudy
0820	↓	63.40	9.11	5.74	757	1.35	109.7	17.2	clear
0825		63.36	9.03	5.75	758	1.32	106.7	11.4	↓
0830		63.36	9.04	5.74	757	1.31	105.2	10.9	
0835	↓	63.36	9.05	5.74	758	1.29	105.6	9.85	↓
							~~195.0~~		
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: 0.45µm Dup ID/Time: —

Comments Sample GEM-97-05B-FAL18 @ 0840

Signature

10/30/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: G6M-13-03X

Project: Devens AOC 50 Fall 2018 Date: 10/30/18

Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	56.64
Depth to bottom (ft BTOR)	92.80
Screen Interval (ft BTOR)	80-90
Total volume purged (gal)	2.0

Sampling Type

Purging Method: Bladder Pump Tubing type: Beveled PTFE Dedicated pump (Y/N): —

Purge start/stop time: 1130-1240 Tubing diameter: 1/4" OD Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556MPS

HACH 2100Q: 11090C012349 09G100702

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1155	140	56.70	12.52	5.22	2618	1.09	-9.2	24.9	cloudy
1200	140	56.70	12.81	5.13	2621	0.91	-8.5	12.7	clear
1205	↓	↓	12.25	5.09	2622	0.88	-8.1	11.60	clear
1210			12.23	5.06	2624	0.83	-7.8	10.4	↓
1215			11.96	5.02	2623	0.78	-7.4	8.21	
1220			12.06	5.01	2620	0.87	-5.3	7.35	
1225			12.04	5.00	2619	0.85	-4.9	7.25	
1230	↓	↓	12.06	5.01	2618	0.81	-5.1	7.29	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: — Dup ID/Time: —

Comments Sample G6M-13-03X-FAL18 @ 1235 VOCs only

Signature

10/30/18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: XSA-12-97X

Project: Devens AOC 50 Fall 2018 Date: 10.30.2018

Location: Fort Devens Massachusetts Sampler: J. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact			✓
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)		✓	

Well Information

Diameter	1.05"
Material	Steel
Depth to water (ft BTOR)	64.71'
Depth to bottom (ft BTOR)	130.5'
Screen Interval (ft BTOR)	119.75-129.75
Total volume purged (gal)	3.70

Sampling Type

Purging Method: Bladder Tubing type: Teflon Dedicated pump (Y/N): _____

Purge start/stop time: 0800/0910 Tubing diameter: 1/4 Air source: Nitrogen

Field Instrument (Model/S/N): YSI 556 - 06H282341 / HACH 2100Q - 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0810	200	* 62.18	6.03	9.95	706	1.09	-213.5	102	Black / Cloudy
0815	200	* 60.58	6.69	10.02	688	0.78	-261.8	59	Black / Cloudy
0820	200	* 60.42	6.98	10.06	683	0.55	-286.1	31.6	Clear
0825	200	* 59.92	7.03	9.91	686	0.46	-263.4	16.8	Clear
0830	200	64.68	-	-	-	-	-	-	-
0835	200	64.65	6.55	9.83	680	0.44	-237.5	16.8	Clear
0840	200	64.65	7.65	9.89	683	0.38	-279.0	20.5	Clear
0845	200	64.65	7.72	9.93	689	0.33	-308.8	25.0	Clear
0850	200	64.65	7.80	9.91	689	0.36	-292.8	27.0	Clear
0855	200	64.64	7.85	9.88	685	0.34	-286.7	25.6	Clear
0900	200	64.64	7.89	9.82	682	0.34	-283.0	27.2	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

GAS PURGED

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Metals Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 45 µm Dup ID/Time: N/A

Comments * DTW probe sensitivity too high causing false readings, reduced @ 0830

Signature

10.30.2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-04-01X

Project: Devens AOC 50 Fall 2018
Location: Fort Devens Massachusetts
Date: 10-30-2018
Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	51.68'
Depth to bottom (ft BTOR)	92'
Screen Interval (ft BGS)	82-92'
Total volume purged (gal)	2.38

Sampling Type

Purging Method: Bladder
Purge start/stop time: 1100 / 1145
Tubing type: Teflon
Tubing diameter: 1/4
Dedicated pump (Y/N): N
Air source: NITROGEN
Field Instrument (Model/S/N): YSI 556 - 06H2823AL / HATCH 2100 Q ~ 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1110	200	51.32	11.71	6.93	4701	0.37	-99.3	23.3	Clear
1115	200	51.32	11.70	6.70	4983	0.35	-85.2	7.55	Clear
1120	200	51.32	11.73	6.60	5102	0.51	-80.1	4.34	Clear
1125	200	51.32	11.77	6.55	5133	0.80	-78.2	3.21	Clear
1130	200	51.32	11.70	6.50	5148	0.50	-74.6	3.15	Clear
1135	200	51.32	11.74	6.48	5152	0.55	-73.1	3.01	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Metals
Filter Size: 45 µm
Duplicate (Y/N): N
Dup ID/Time: N/A
MS/MSD (Y/N): N

Comments Sampled @ 11.35

[signature]
Signature

10-30-2018
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GGM-04-02X_FAL18

Project: Devens AOC 50 Fall 2018 Date: 10/30/18
Location: Fort Devens Massachusetts Sampler: Owen Jackson

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	58.65
Depth to bottom (ft BTOR)	98.96
Screen Interval (ft BGS)	80-90
Total volume purged (gal)	4.5

Sampling Type

Purging Method: Bladder
Purge start/stop time: 1110/1245
Tubing type: ¼" TLP
Tubing diameter: ¼"
Dedicated pump (Y/N): N
Air source: N/A
Field Instrument (Model/S/N): YSI 556 (15J102921)
LaMotte 2020we (5086-5014)

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1200	250	58.84	12.25	5.96	1316	11.2	-9.9	8.39	Clear
1205	↓	58.84	12.25	5.97	1316	7.8	-14.8	1.26	↓
1210	↓	58.84	12.23	5.99	1315	6.0	-17.7	1.65	↓
1215	↓	58.85	12.20	6.01	1315	5.0	-19.7	1.36	↓
1220	↓	58.85	12.16	6.01	1315	3.7	-20.9	0.72	↓
1225	↓	58.84	12.16	6.02	1319	1.5	-21.7	0.88	↓
1230	↓	58.84	12.17	6.02	1316	1.0	-22.3	1.30	↓
1235	↓	58.84	12.15	6.01	1315	0.9	-22.9	0.71	↓
1240	↓	58.84	12.12	6.01	1317	0.9	-22.7	0.58	↓
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Y
Filter Size: 0.45µm
Duplicate (Y/N): Y
Dup ID/Time: 1255
MS/MSD (Y/N): N

Comments Sampled @ 1245

Signature

10/30/18
Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GMW-04-03X

Project: Devens AOC 50 Fall 2018 Date: 10-30-2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	55.50'
Depth to bottom (ft BTOR)	95'
Screen Interval (ft BGS)	85'-95'
Total volume purged (gal)	2.38

Sampling Type

Purging Method Bladder Tubing type Teflon Dedicated pump (Y/N) _____

Purge start/stop time 1205 / 1250 Tubing diameter 1/4" Air source NITROGEN

Field Instrument (Model/S/N) YSI 556 - 06H282BAC / HACH 2100Q - 023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1215	200	56.40'	13.59	8.05	3607	8.15	-154.1	32.1	Clear
1220	200	55.40'	13.56	6.87	2628	1.72	-110.1	15.4	Clear
1225	200	55.39'	13.51	6.84	2841	0.80	-111.9	8.18	Clear
1230	200	55.40'	13.48	6.83	2939	0.63	-112.2	7.11	Clear
1235	200	55.38'	13.45	6.83	2951	0.52	-116.2	6.95	Clear
1240	200	55.39'	13.41	6.78	2944	0.57	-113.0	6.82	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Metals Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 45 µ Dup ID/Time: N/A

Comments Sample Collected 1240

Signature

10-30-2018

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GCOM-03-08X

Project: Devens AOC 50 Fall 2018 Date: 10·31·2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	51.08
Depth to bottom (ft BTOR)	110.01
Screen Interval (ft BTOR)	127.20 - 142.20
Total volume purged (gal)	1.69

Sampling Type

Purging Method: Bladder Tubing type: Teflon Dedicated pump (Y/N):

Purge start/stop time: 1220 / 1300 Tubing diameter: 1/4 Air source: NITROGEN

Field Instrument (Model/S/N): YSI 556-06H2823AC | HACH 2100Q-023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1230	150	51.28	10.27	6.81	416	3.68	57.4	210	Cloudy / pink
1235	150	51.28	10.41	6.70	436	3.49	45.6	78	Cloudy / Grey
1240	150	51.29	10.51	6.69	455	2.76	40.6	50	Cloudy / white
1245	150	51.28	10.56	6.68	468	1.68	35.1	25	Clear
1250	150	51.28	10.64	6.67	478	1.65	32.3	28	Clear
1255	150	51.29	10.75	6.67	478	1.69	30.9	25	Clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): metals Duplicate (Y/N): N MS/MSD (Y/N): Y

Filter Size: 45 µm Dup ID/Time: N/A

Comments Sampled @

Signature

10-31-18

Date

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: XSA - 12 - 96X

Project: Devens AOC 50 Fall 2018 Date: 10.31.2018

Location: Fort Devens Massachusetts Sampler: S. GEORGES

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact			✓
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	1"
Material	Metal
Depth to water (ft BTOR)	67.31
Depth to bottom (ft BTOR)	132.25
Screen Interval (ft BTOR)	122.97 - 132.97
Total volume purged (gal)	1.59

Sampling Type

Purging Method: Bladder Tubing type: Tefl/m Dedicated pump (Y/N): Y

Purge start/stop time: 1000 / 1040 Tubing diameter: 1/4 Air source: NITROGEN

Field Instrument (Model/S/N): YSI 556 - 16H2823AC / HACH 21002-023271

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1010	150	67.05	8.60	7.08	1241	2.58	121.6	250	Blk./Cloudy
1015	150	67.08	9.00	7.28	1160	0.74	-104.6	114	White/Cloudy
1020	150	67.09	10.11	6.90	1.240	0.356	-111.6	58.6	Clear
1025	150	67.10	10.18	6.76	1290	0.51	-96.1	33.4	Clear
1030	150	67.10	10.31	6.68	1278	0.57	-93.0	30.1	Clear
1035	150	67.11	10.36	6.66	1268	0.50	-82.6	31.8	Clear
1040	150	67.12	10.81	6.58	1259	0.41	-63.8	21.2	Clear
1045	150	67.12	10.56	6.56	1231	0.34	-59.0	19.9	Clear
1050	150	67.12	10.50	6.53	1221	0.38	-54.7	20.8	Clear.
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Metals Duplicate (Y/N): N MS/MSD (Y/N): N

Filter Size: 45 µm Dup ID/Time: N/A

Comments

Signature

10-31-18

Date

KGS

Field Instrument Calibration Log

Date: 10/19/18 **Weather:** 50° Sunny

Project/Site Name: AOC 50 Fall 2018 Sampling **Instrument:** YSI

Calibrated By: Owen Jackson **Serial Number:** 15J100921

Parameters	Solution Expiration Date	Morning Calibration Time 0700		Cal. Temperature °C	Afternoon Calibration Time 1400		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	3/2019	1232	1413	15.75	1467	1413	13.33
pH (7)	4/2020	6.97	7.00	17.27	7.02	7.00	13.14
pH (4)	3/2020	3.74	4.00	17.17	4.12	4.00	13.16
pH (10)	10/2019	9.96	10.00	16.19	10.01	10.00	13.32
ORP (240 mv)	10/2022	258.1	240.0	15.06	237.9	240.0	13.39
Dissolved Oxygen (%)	-	113.3	100.0	6.55	89.6	100.0	14.56
Dissolved Oxygen (mg/L)	-	-	-	-	-	-	-
Barometric Pressure (mmHg)	-	760	-	-	760	-	-

Notes:

Signature: [signature] **Date:** 10/19/18

Turbidity Instrument Calibration Log

Project/Site Name: AOC 50 Fall 2018 Sampling
Calibrated By: Owen Jackson

Instrument: Hach 2100 Q
Serial Number: 13110C029663

	AM				PM			
Date	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**
10/19/18	9.84/10.0	19.9/20.0	97.8/100	809/800	9.54/10.0	20.9/20.0	114/100	799/800

Signature: [signature]

Date: 10/19/18

KGS

Field Instrument Calibration Log

Date: 10/22/2018 **Weather:** Sunny 40°F

Project/Site Name: AOC ~~43G~~ 50 (CH) Fall 2018 Sampling **Instrument:** YSI 556 MPS

Calibrated By: G. Hazebrouck **Serial Number:** 15J100921

Parameters	Solution Expiration Date	Morning Calibration Time 10:00		Cal. Temperature °C	Afternoon Calibration Time 1500		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	03/2019	1.342	1.413	15.25	1.373	1.413	11.48
pH (7)	04/2020	7.04	7.0	15.79	6.99	7.0	12.0 ~~4~~ (CH)
pH (4)	03/2020	3.92	4	15.80	4.10	4.0	12.08
pH (10)	10/2019	9.96	10.0	15.11	9.92	10	11.82
ORP (240 mv)	10/2022	239.0	240	15.89	239.7	240	11.56
Dissolved Oxygen (%)	-	111.5	100	9.56	99.9	100	10.09
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						

Notes:
No Variance

Signature: [signature] **Date:** 10/22/18

KGS

Field Instrument Calibration Log

Date: 10/23/2018 50 (GH)

Weather: Cloudy 55°F/35°F

Project/Site Name: AOC ~~69W~~ Fall 2018 Sampling

Instrument: YSI 556

Calibrated By: G. Hazelwood

Serial Number: 15J100921

Parameters	Solution Expiration Date	Morning Calibration Time 0500		Cal. Temperature °C	Afternoon Calibration Time 1436		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	03/2019	1.473	1.413	7.25	1.432	1.413	10.63
pH (7)	04/2020	7.01	7.00	7.15	7.25	7.02	11.02
pH (4)	03/2020	3.97	4.0	8.25	4.03	4.0	10.94
pH (10)	10/2019	9.87	10.0	7.18	9.86	10.0	10.93
ORP (240 mv)	10/2022	248.0	240.0	6.43	230.5	240.0	11.21
Dissolved Oxygen (%)	-	100.1	100.0	6.08	97.5	100.0	12.75
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						

Notes: No Variance

Signature: [signature]

Date: 10/23/18

Field Instrument Calibration Log

Date: 10/24/2018 **Weather:** Sunny 48°F/41°F

Project/Site Name: AOC ~~43G~~ 50 Fall 2018 Sampling **Instrument:** YSI 556

Calibrated By: G. Hazelbrock **Serial Number:** 15J100992

Parameters	Solution Expiration Date	Morning Calibration Time 0500		Cal. Temperature °C	Afternoon Calibration Time 1800		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	03/2019	1.416	1.413	14.50	1.447	1.413	14.04
pH (7)	04/2020	6.75	7.0	13.31	6.91	7.0	13.81
pH (4)	03/2020	3.97	4.0	14.97	3.98	4.0	14.31
pH (10)	10/2019	9.95	10.0	15.22	9.93	10.0	14.18
ORP (240 mv)	10/2022	235.1	240.0	14.80	235.9	240.0	14.01
Dissolved Oxygen (%)	-	100.1	100.0	16.89	98.6	100.0	15.81
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						

Notes: No Variance

Signature: [signature] **Date:** 10/24/2018

Field Instrument Calibration Log

Date: 10/25/18 **Weather:** 40°F, Cold

Project/Site Name: ~~Sudbury AOC A7~~ AOC 50 Fall 2018 LTM **Instrument:** YSI 556 MPS

Calibrated By: Melissa Miller **Serial Number:** 07G100702

Post Cal check

Parameters	Solution Expiration Year Date	Morning Calibration Time 0745		Cal. Temperature °C	Afternoon Calibration Time 1110		Cal. Temperature °C
Specific Conductivity (1.413 mS/cm°)	2019	1.497	1.413	9.64	1.420	—	12.98
pH (7)	2020	7.04	7.00	10.21	7.03	—	13.21
pH (4)	2019	3.98	4.00	10.14	3.99	—	13.05
pH (10)	2019	9.96	10.00	9.96	9.98	—	12.73
ORP (240 mv)	2022	246.4	240.0	9.36	241.3	—	12.63
Dissolved Oxygen (%)	-	99.2	100.0	5.27°C	101.2	—	7.58
Dissolved Oxygen (mg/L)	-	12.63	12.72	5.27°C	12.70	—	7.58
Barometric Pressure (mmHg)	-	760	—	—	760		

Notes:
No variance

Signature: Melissa Miller **Date:** 10/25/18

Turbidity Instrument Calibration Log

Project/Site Name: ~~Sudbury AOC A7~~ AOC 50 Fall 2018 LTM
Calibrated By: Melissa Miller

Instrument: HACH 2100Q
Serial Number: 13100C029663

	AM				PM Post field check			
Date	Pre/Post - Cal 10 NTU	Pre/Post - Cal 20 NTU	Pre/Post - Cal 100 NTU	Pre/Post - Cal 800 NTU	Pre/Post - Cal 10 NTU	Pre/Post - Cal 20 NTU	Pre/Post - Cal 100 NTU	Pre/Post - Cal 800 NTU
* 10/25/18	9.76 / 10	21.5 / 20	100 / 100	800 / 800	10.02	20.3	99	795

Signature: Melissa Miller
Date: 10/25/18

* no variance

KGS

Field Instrument Calibration Log

Date: 10/25/18 **Weather:** Partly cloudy 46°F/33°F

Project/Site Name: AOC 50 ~~DCL~~ Fall 2018 Sampling **Instrument:** YSI 556

Calibrated By: G. Hargrove **Serial Number:** 15J100492

Parameters	Solution Expiration Date	Morning Calibration Time 0646		Cal. Temperature °C	Afternoon Calibration Time _____		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	03/2019	1,445	1,413	14.11			
pH (7)	04/2020	6.95	7.0	14.21			
pH (4)	03/2020	4.12	4.0	14.05			
pH (10)	10/2019	9.97	10.0	13.91			
ORP (240 mv)	10/2021	237.5	240.0	14.10			
Dissolved Oxygen (%)	-						
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						
Notes:							

Signature: Garrett Hargrove **Date:** 10-25-18

KGS

Field Instrument Calibration Log

Date: OCT 29 2018 **Weather:** 45°F ; Light Rain

Project/Site Name: ~~DCL~~ AOC50 Fall 2018 Sampling **Instrument:** YSi 556

Calibrated By: S. GEDDINGS **Serial Number:** 06H2823AL

Parameters	Solution Expiration Date	Morning Calibration Time 0750		Cal. Temperature °C	Afternoon Calibration Time _____		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm[c])	12/31/2019	1464	1431	14.77			
pH (7)	02/29/2020	7.00	7.00	16.70			
pH (4)	09/30/2019	4.05	4.00	16.01			
pH (10)	12/31/2019	9.91	9.99	16.29			
ORP (240 mv)	10/31/2022	246	240	16.68			
Dissolved Oxygen (%)	-	94.8	101.1	16.25			
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						
Notes:							

Signature: _____ **Date:** 10.29.2018

KGS

Field Instrument Calibration Log

Date: 10/30/18 **Weather:** 38° Sunny

Project/Site Name: AOC 50 LTM Devens **Instrument:** YSI 556

Calibrated By: Owen Jackson **Serial Number:** 15J100921

Parameters	Solution Expiration Date	Morning Calibration Time 1130		Cal. Temperature °C	Afternoon Calibration Time 1600		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1.413 µS/cm[c])	3/2019	1,513	1,413	15.18	1,353	1,413	12.81	±10 µS/cm
pH (7)	elegible	7.13	7.00	14.85	6.99	7.00	12.91	± 0.3 Ph *
pH (4)	elegible	3.52	4.00	14.25	4.11	4.00	12.63	± 0.3 Ph *
pH (10)	10/2019	9.87	10.00	13.94	9.94	10.00	12.65	± 0.3 Ph *
ORP (240 mv)	10/2022	243.2	240.0	14.34	242.2	240.0	12.57	±10 mv
Dissolved Oxygen (%)	—	103.7	100.0	10.53	86.2	100.0	11.45	-
Dissolved Oxygen (mg/L)	—	11.55	11.16	—	9.40	10.92	—	± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)	—	760		—	760	—	—	-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: 1.52 mg/L

Signature: [signature] **Date:** 10/30/18

Turbidity Instrument Calibration Log

Project/Site Name: AOC 50 LTM Devens

Instrument: Lamotte 2020we

Calibrated By: Owen Jackson

Serial Number: 5086-5014

Date	Pre-Cal 0 NTU AM	Post-Cal 0 NTU AM	Pre-Cal 10 NTU AM	Post-Cal 10 NTU AM	Pre-Cal 0 NTU PM	Post-Cal 0 NTU PM	Pre-Cal 10 NTU PM	Post-Cal 10 NTU PM
10/30/18	0.01	0.00	10.20	10.00	0.02	0.00	9.81	10.00

Post Calibration Criteria			
-	-	± 0.5	Variance Noted: N/A

Signature:

Date: 10/30/18

KGS

Field Instrument Calibration Log

Date: October 30 2018 **Weather:** 35°F ; Cloudy

Project/Site Name: ~~DCL~~ AOC 50 Fall 2018 Sampling **Instrument:** YSI 556

Calibrated By: S. Georges **Serial Number:** 06H2823AL

Parameters	Solution Expiration Date	Morning Calibration Time 0725		Cal. Temperature °C	Afternoon Calibration Time _____		Cal. Temperature °C
Specific Conductivity (1.413 µS/cm°)	12/31/2019	1425	1413	16.00			
pH (7)	02/29/2020	7.02	7.00	16.70			
pH (4)	09/30/2019	4.05	4.00	16.25			
pH (10)	12/31/2019	10.21	10.01	16.50			
ORP (240 mv)	10/31/2020	252.3	240.0	16.68			
Dissolved Oxygen (%)	-	87.1	99.9	16.50			
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						

Notes:

Signature: [signature] **Date:** 10.30.2018

KGS

Field Instrument Calibration Log

Date: 10.31.2018 **Weather:** 29°F Sunny

Project/Site Name: ~~DCL~~ ADC 50 Fall 2018 Sampling **Instrument:** YSI 556

Calibrated By: S. GEORGES **Serial Number:** 06H2823AL

Parameters	Solution Expiration Date	Morning Calibration Time 0810		Cal. Temperature °C	Afternoon Calibration Time _____		Cal. Temperature °C
Specific Conductivity (1,413 µS/cm°)		1517	1413	20.70			
pH (7)		7.12	7.00	20.54			
pH (4)		4.04	4.00	12.00			
pH (10)		9.72	10.05	11.63			
ORP (240 mv)		218.4	240.0	20.15			
Dissolved Oxygen (%)	-	78.5	100.8	18.74			
Dissolved Oxygen (mg/L)	-						
Barometric Pressure (mmHg)	-						

Notes:

Signature: [signature] **Date:** 10.31.2018

Turbidity Instrument Calibration Log

AOC 50

Project/Site Name: ~~DCL~~ Fall 2018 Sampling
Calibrated By: S. GEORGES

Instrument: HACH 2100 Q
Serial Number: 823271

	AM				PM			
Date	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**
10-29-2018	11.3 / 10.1	22.5 / 20.3	101 / 100	808 / 801	10.5 / 10.0	20.8 / 20.1	111 / 101	807 / 800
10-30-2018	10.5 / 10.0	20.8 / 20.1	102 / 100	805 / 801	10.1 / 10.0	20.1 / 20.0	104 / 100	803 / 800
10-31-2018	10.6 / 10.0	21.3 / 20.0	105 / 100	829 / 800	10.0 / 10.0	20.4 / 20.0	100 / 100	801 / 800

Signature: [signature]

Date: 10-31-2018

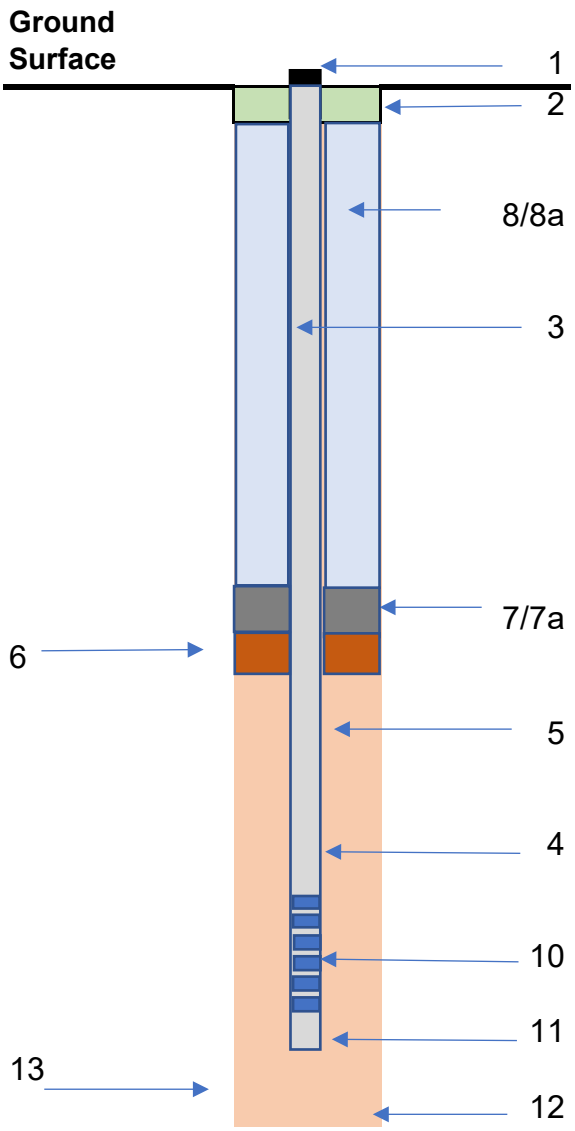
A.3

Winter 2019 Monitoring Well Construction Logs

KGS	Project: Devens	Well Identification: G6M-18-01
	Project Number: 1082-0005-005	

WELL CONSTRUCTION DIAGRAM

Client: USACE	Location: AOC 50
Drilling Company: Cascade Drilling, LP.	
Drilling Method and Equipment: Truck-Mounted Full Sonic Drilling with 6" Core Barrel	
Drilling Date(s): January 9, 2019	Well Construction Date: January 9, 2019
Potable Water Used:Yes Source: SHL ATP	Drums of IDW: 1 Drum
KGS Field Personnel: Brett Anchukaitis	Associated Soil Boring Log: None
Ground Elevation (ft msl): ~ 266 ft (NVGD)	Top of PVC Elevation (ft msl): TBD



1. Well Protection Type: Steel Protective Flushmount
   Stickup: Flushmount, 4" Steel Cover
2. Concrete Pad Depth: 6-inch.
3. Diameter/Type of well casing: 2-inch/PVC Riser
4. Type/Screen Slot: PVC Screen/0.010-inch
5. Type of Screen Filter Sand: #1
   Quantity Used: 6- 50lb Bags
   Top/Bottom of Pack: 114/127 ft bgs
6. Type of Filter Sand: #1
   Quanity Used: na
   Top/Bottom of Pack:
7. Type of Seal: Bentonite
   7a.Top/Bottom of Seal: 111-114 ft bgs, 0-10 ft bgs
8. Grout Mixture Used: cement/bentonite mix
   8a. Placement Method: tremie pipe
   Top/Bottom of Grout: 10-110
9. Screen length: 10 feet
10. Screen interval: 116-126 ft bgs
11. Sump Length: 3-in. PVC cap
12. Bottom of Boring: 127 ft bgs
13. Diameter of borehole: 6 inches

Comments: No Bollards to be installed at G6M-18-01 near runway. Bentonite Chipped remaining 10-ft to ground surface, grout was being absorbed into overburden too much.

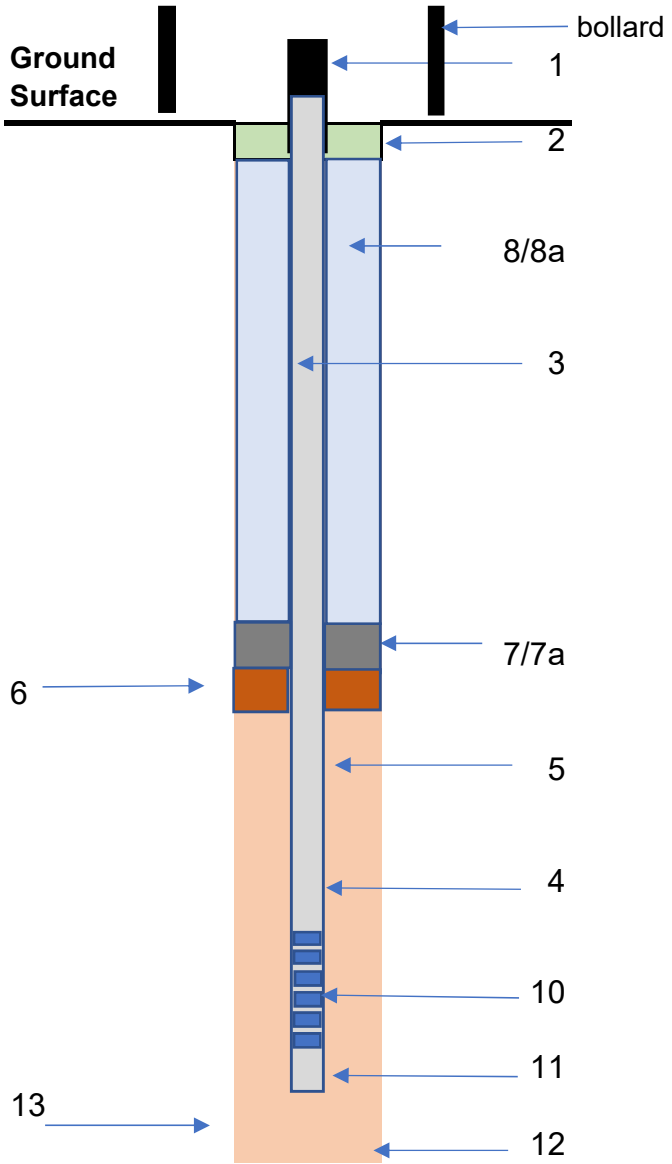
TBD - to be determined

na - not available

KGS	Project: Devens	Well Identification: G6M-18-02
	Project Number: 1082-0005-005	

WELL CONSTRUCTION DIAGRAM

Client: USACE	Location: AOC 50
Drilling Company: Cascade Drilling, LP	
Drilling Method and Equipment: Truck-Mounted Full Sonic, 6-in Core Barrel	
Drilling Date(s): January 8-9, 2019	Well Construction Date: January 9, 2019
Potable Water Used:Yes Source: SHL ATP	Drums of IDW: 2 Drums
KGS Field Personnel: Brett Anchukaitis	Associated Soil Boring Log: None
Ground Elevation (ft msl): ~ 268 ft (NVGD)	Top of PVC Elevation (ft msl): TBD



1. Well Protection Type: Steel Protective Standpipe
   Stickup: 4" Steel Stickup, 24" height
2. Concrete Pad Depth: 6"
3. Diameter/Type of well casing: 2-inch/PVC Riser
4. Type/Screen Slot: PVC Screen/0.010-inch
5. Type of Screen Filter Sand: #1
   Quantity Used: 6.5- 50lb Bags
   Top/Bottom of Pack: 122-136 ft bgs
6. Type of Filter Sand: #1
   Quanity Used: na
   Top/Bottom of Pack:
7. Type of Seal: Bentonite
   7a.Top/Bottom of Seal: 119-122 ft bgs, 20-0 ft bgs
8. Grout Mixture Used: cement/bentonite mix
   8a. Placement Method: tremie pipe
   Top/Bottom of Grout: 20-119
9. Screen length: 10 feet
10. Screen interval: 123.95-133.95
11. Sump Length: 3" PVC Cap
12. Bottom of Boring: 137 ft bgs
13. Diameter of borehole: 6 inches

Comments: Bentonite Chipped remaining 20-ft to ground surface, grout was being absorbed into overburen too much.

TBD - to be determined

na - not available

A.4

Winter 2019 Monitoring Well Baseline Event

KGS

Start purge @ 1415 @ 5.2 L/min ~1.3 gpm

MONITORING WELL DEVELOPMENT RECORD

Purge at least 140 gal.

SITE:	Devens - AOC 50	WELL IDENTIFICATION NO.	GOM-1802	SCREEN LENGTH (FT):	10
SITE ADDRESS:	100 Fitchburg Rd, Ayer MA	DATE INSTALLED:	1/9/19	CASING ID (IN):	4" casing, 2" PVC
PROJECT NAME:	AOC 50 VOC PlUME Deliniation	DATE DEVELOPED:	1/10/19	DEPTH TO BOTTOM (FT):	126.08 bgs
PROJECT NUMBER:	1082-0005-005	DEVELOPMENT METHOD:	pump/surge	STATIC WATER LEVEL BEFORE (FT):	58.15 top PVC, pre/cut
PERSONNEL:	B. Anchukaitis	PUMP TYPE:	monsoon - whale pump	STATIC WATER LEVEL AFTER (FT):	w/n gauge 1/11/19
COMPANY:	KGS				

TIME	ESTIMATED SEDIMENT THICKNESS (IN.) Measured from TOC before/during/after	CUMULATIVE WATER VOLUME (GALS).	WATER LEVEL READINGS (FT. BELOW TOC)	TURBIDITY (NTU)	TEMP (C°)	SP. COND. (UNITS)	DO (mg/L)	pH	ORP (mV)	REMARKS (odor, color, clarity, particulate matter)
	Initial DTB Post DTB									
1445	5"	40	61.28	151	11.81	448	5.53	9.40	-91.1	cloudy
1500	~2"	59.5	60.95	24.1 (857 after surging)	12.80	365	5.71	10.12	-69.7	cloudy
1515	↓	79	60.95	55.9	12.11	334	6.13	10.03	-72.1	cloudy
1530		98.5	61.10	52.8	11.64	300	6.23	9.90	-72.2	cloudy
1545		118	61.10	399 (after surging)	12.67	266	6.51	9.90	-60.0	cloudy
1600	↓	137.5	60.30	41.8	12.64	253	6.59	9.77	-45.4	cloudy
1615	0"	157	60.30	40.1	12.57	253	6.58	9.71	-44.3	clear
1630	0"	176.5	60.30	39.8	12.51	253	6.58	9.70	-42.1	clear
1645	0"	196	60.30	38.9	12.48	253	6.51	9.70	-41.5	clear
—	STOP —	—	—	—	—	—	—	—	—	—

KGS

monsoon pump @ 0.9-1.0 gpm (~3.8-4.0 Lpm)

MONITORING WELL DEVELOPMENT RECORD

SITE:	Devens - AOC 50	WELL IDENTIFICATION NO.	GOM-18-02	SCREEN LENGTH (FT):	10
SITE ADDRESS:	100 Fitchburg Rd, Ayer MA	DATE INSTALLED:	1/9/19	CASING ID (IN):	4" casing, 2" PVC
PROJECT NAME:	AOC 50 VOC PlUME Delinlation	DATE DEVELOPED:	1/10/19	DEPTH TO BOTTOM (FT): BTOR	135.75 (PVC = 22" above gs)
PROJECT NUMBER:	1062-0005-005	DEVELOPMENT METHOD:	monsoon - pump / surge	STATIC WATER LEVEL BEFORE (FT): BTOR	62.90
PERSONNEL:	B. Anchukaitis	PUMP TYPE:	monsoon whale pump	STATIC WATER LEVEL AFTER (FT): BTOR	will gauge 1/11/19
COMPANY:	KGS				

TIME	ESTIMATED SEDIMENT THICKNESS (IN.) Measured from TOC before/during/after Initial DTB Post DTB	CUMULATIVE WATER VOLUME (GALS).	WATER LEVEL READINGS (FT. BELOW TOC)	TURBIDITY (NTU)	TEMP (C°)	SP. COND. (UNITS/uS)	DO (mg/L)	pH	ORP (mV)	REMARKS (odor, color, clarity, particulate matter)
0830	~2"	30	65.10	23.2 (>1,000 +surge)	11.46	722	5.05	6.51	-60.2	surge produces turbidity: over 1,000 NTU
0845	~2" →	45	65.15	24.7 ↓	12.45	724	3.64	6.56	-74.4	"
0900	~0"	60	65.00	26.1 (>1,000 after surge)	12.19	726	3.66	6.56	-81.7	"
0915	~0"	75	65.00	35.0 (>1,000 after surge)	12.20	733	6.41	6.57	-82.3	"
0930		90	64.88	96.9	12.24	734	5.97	6.57	-78.6	"
0945	~0"	105	64.85	876 (after surging)	11.90	744	4.03	6.47	-63.8	surge turbidity = 876
1000		120	64.80	24.7	12.02	742	4.00	6.55	-73.0	clear
1015	~0"	135	64.65	248 (after surging)	11.98	738	3.80	6.53	-75.0	cloudy
1030		150	64.70	20.0	12.00	749	3.94	6.53	-66.6	clear
1045	~0"	165	64.55	13.0 (451 after surging)	11.98	753	3.93	6.49	-62.9	cloudy after surging, clear prior to surging
1100		180	64.55	15.3	11.55	755	3.66	6.48	-62.2	clear
1115	~0"	195	65.45	10.3 (544 after surging)	11.30	759	4.01	6.41	-53.8	clear before surging
1130		210	65.40	19.7		759	3.92	6.46	-50.9	clear
1145	~0"	225	65.40	25.6	11.32	759	3.85	6.38	-46.6	clear
1200		240	65.42	13.8 (176 after surging)	11.03	760	3.99	6.34	-41.6	clear
1215		255	65.42	11.2	11.07	763	4.10	6.32	-36.9	clear
1230 ~~1220~~	Empty H2O tote →	~~230~~	—	-	—	—	—	—	—	-
~~1245~~ 1300		~~285~~								

KGS

MONITORING WELL DEVELOPMENT RECORD

SITE:	Devens - AOC 50	WELL IDENTIFICATION NO.	FLOM PS-02	SCREEN LENGTH (FT):	10
SITE ADDRESS:	100 Fitchburg Rd. Ayer MA	DATE INSTALLED:	1/9/19	CASING ID (IN):	4" steel, 2" PVC riser
PROJECT NAME:	AOC 50 VOC PIUME Deliniation	DATE DEVELOPED:	1/10/19	DEPTH TO BOTTOM (FT):	135.75 (PVC=22" above gs @ time of measure)
PROJECT NUMBER:	1082-0005-005	DEVELOPMENT METHOD:	surge/pump	STATIC WATER LEVEL BEFORE (FT):	62.90
PERSONNEL:	B. Anchukaitis	PUMP TYPE:	monsoon	STATIC WATER LEVEL AFTER (FT):	will gauge 1/11/19
COMPANY:	KGS				

TIME	ESTIMATED SEDIMENT THICKNESS (IN.) Measured from TOC before/during/after		CUMULATIVE WATER VOLUME (GALS).	WATER LEVEL READINGS (FT. BELOW TOC)	TURBIDITY (NTU)	TEMP (C°)	SP. COND. (UNITS___)	DO (mg/L)	pH	ORP (mV)	REMARKS (odor, color, clarity, particulate matter)
	Initial DTB	Post DTB									
1343	0"		350	65.42	7.43	10.88	762	4.11	6.37	-18.6	clear
1353	0"		365	65.42	7.51	10.91	763	4.03	6.37	-19.1	clear
1403	0"		380	65.42	7.36	10.95	763	4.08	6.37	-19.5	clear

Field Instrument Calibration Log

Date: 1/10/19 **Weather:** Clear, 30F, 20mph winds

Project/Site Name: AOC 50 Well Installation **Instrument:** YSI 556MPS

Calibrated By: B-cA **Serial Number:** 14A100102

Parameters	Solution Expiration Date	Morning Calibration Time 0615		Cal. Temperature °C	Afternoon Calibration Time 1730		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1.413 µS/cm°)	04/21	1400	1413	1685	1426	1413	8.30	±10 µS/cm
pH (7)	01/21	6.98	7.00	16.92	7.25	7.00	8.51	± 0.3 Ph *
pH (4)	01/21	3.93	4.00	16.96	4.07	4.00	8.65	± 0.3 Ph *
pH (10)	12/19	9.94	9.99	16.43	9.78	10.00	8.61	± 0.3 Ph *
ORP (240 mv)	01/23	236.8	240.0	16.34	239.7	240.0	8.63	±10 mv
Dissolved Oxygen (%)	-	100.2	100.0	15.03	101.0	100.0	8.72	-
Dissolved Oxygen (mg/L)	-	10.10	10.08	15.03	10.15	10.09	8.72	± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)	-	760	760	15.03	760	760	8.72	-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: none

Signature: [signature] **Date:** 1/10/19

Turbidity Instrument Calibration Log

Project/Site Name: PFAS RI - EXISTING WELL

Instrument: Hach 2100Q

Calibrated By: BrA

Serial Number: 13110C029603

	AM				PM			
Date	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**	**Pre/Post - Cal 10 NTU**	**Pre/Post - Cal 20 NTU**	**Pre/Post - Cal 100 NTU**	**Pre/Post - Cal 800 NTU**
1/10/19	9.81/10.0	19.9/20.0	99.7/100	796/800	10.0/10.0	20.4/20.0	102/100	801/800

	Post Calibration Criteria			
Variance Noted: none	± 0.5	± 1	± 5	± 40

Signature: [signature]

Date: 1/10/19

1

KOMAN GOVERNMENT SOLUTIONS LLC

Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GDM-18-01

Project: Devens AOC 50 Date: 1/14/19

Location: Fort Devens Massachusetts Sampler: BnA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present	✓		
Locked (stickup wells)			✓

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	57.90
Depth to bottom (ft BTOR)	126.08
Screen Interval (ft ~~BTOR~~ bgs)	116-126 bgs
Total volume purged (gal)	

Sampling Type

Purging Method 1.75" Bladder Tubing type Bonded TLPE Dedicated pump (Y/N) N

Purge start/stop time 1100 - Tubing diameter 1/4" OD Air source Nitrogen

Field Instrument (Model/S/N) YSI 556 MPS Lamotte 2020we

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm^c)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
1120	200	58.00	12.14	8.12	165	7.82	96.7	18.1	Cloudy
1125	200	58.00	11.07	8.49	163	7.55	87.2	16.3	clear
1130	200	58.00	11.95	8.61	161	7.18	83.2	12.8	Clear
1135	200	58.00	11.82	8.55	160	7.16	79.6	5.31	clear
1140	200	58.00	11.84	8.54	161	7.10	76.5	4.14	clear
1145	200	58.00	11.78	8.54	162	7.14	74.2	3.76	clear
1150	200	58.00	11.77	8.64	163	7.15	72.0	3.51	clear
1155	200	58.00	11.72	8.59	164	7.07	71.3	3.20	clear
1200	200	58.00	11.65	8.57	165	7.02	70.1	3.12	clear
1205	200	58.00	11.60	8.58	166	7.00	69.0	3.09	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N): Duplicate (Y/N): — MS/MSD (Y/N): —

Filter Size: — Dup ID/Time: —

Comments Sample GDM-18-01-SAMPLE 1205 T°C not 100% stable.

Signature

1/14/19
Date

KOMAN GOVERNMENT SOLUTIONS LLC
Low Flow/ Low Stress Groundwater Sampling Log

Well Identification: GLM-18-02

Project: Devens AOC 50 Date: 1/14/19
Location: Fort Devens Massachusetts Sampler: BrA

Well Integrity

	Yes	No	N/A
Casing Secure	✓		
Concrete Pad intact	✓		
PVC casing intact	✓		
Well gripper present	✓		
Bolts present			✓
Locked (stickup wells)	✓		

Well Information

Diameter	2"
Material	PVC
Depth to water (ft BTOR)	63.79
Depth to bottom (ft BTOR)	135.85
Screen Interval (ft BTOR)	124-134
Total volume purged (gal)	6.0 → of hydraulic conductivity testing

Sampling Type 1.75"
Purging Method Bladder Tubing type TL LDPE Dedicated pump (Y/N) N
Purge start/stop time 0815- Tubing diameter 1/4" OD Air source Nitrogen
Field Instrument (Model/S/N) 451556MPS
Lamotte

Stabilization Parameters

Time (hhmm)	Flow Rate (ml/min)	Depth to Water (ft)	Temp (°C)	pH (STD)	SPC (µS/cm°)	DO (mg/L)	ORP (mv)	Turbidity (NTU)	Color/Clarity
0845	200	63.81	10.42	5.991	722	5.21	188.7	18.7	cloudy
0850	200	63.81	10.35	6.00	721	4.54	181.5	16.1	clear
0855	200	63.81	10.26	6.03	719	4.24	172.3	15.4	clear
0900	200	63.81	10.49	6.09	723	4.10	162.1	8.73	clear
0905	200	63.81	10.54	6.14	728	4.06	155.5	6.09	clear
0910	200	63.81	10.52	6.17	725	3.93	146.7	4.62	clear
0915	200	63.81	10.70	6.21	722	3.80	140.3	3.78	clear
0920	200	63.81	10.62	6.22	722	3.80	139.5	3.86	clear
0925	200	63.81	10.65	6.23	722	3.90	137.9	3.71	clear
0930	200	63.81	10.74	6.22	722	3.85	137.1	3.69	clear
Acceptance Criteria:		<0.3ft	±3%	±0.1	±3%	±10%	± 10mv	10%	

2" Screen Volume = 0.163 gal/ft or 616 ml per foot

Sampling Details

Field Filtered (Y/N) Duplicate (Y/N) — MS/MSD (Y/N) —
Filter Size: — Dup ID/Time: —

Comments Sample GLM-18-02-JAN 19 @ ~~0845~~ 0930

Signature

1/14/19
Date

KGS

Field Instrument Calibration Log

Date: 1/14/19 **Weather:** Sunny 12°F

Project/Site Name: AOC50 Well Inst. U / PFAS R1 **Instrument:** YSI 556 MPS

Calibrated By: B/A **Serial Number:** 12C100125

Parameters	Solution Expiration Date	Morning Calibration Time 0615		Cal. Temperature °C	Afternoon Calibration Time 1515		Cal. Temperature °C	Post Cal. Criteria
Specific Conductivity (1413 µS/cm°)	03/19	1367	1413	1789	1344 ~~1419~~	1413 ~~7.00~~	16.48 ~~15.60~~	±10 µS/cm
pH (7)		7.28	7.00	18.07	7.14	7.00	15.62	± 0.3 Ph *
pH (4)		3.57	4.00	17.57	3.99	4.00	16.42	± 0.3 Ph *
pH (10)		10.05	10.00	17.77	9.98	10.00	16.64	± 0.3 Ph *
ORP (240 mv)		215.8	240.0	18.21	239.6	240.0	16.31	±10 mv
Dissolved Oxygen (%)		97.8	100.0	16.84	98.1	100.0	15.92	-
Dissolved Oxygen (mg/L)		9.49	9.65	16.84	953	9.65	15.92	± 0.5 mg/L < 0.5 mg/L for 0 mg/L solution, no negative value
Barometric Pressure (mmHg)		760	760	16.84	760	760	15.92	-

Notes:

*** Ph Unit with Ph 7 Buffer**

Variance Noted: SPC

Signature: [signature] **Date:** 1/14/19

Turbidity Instrument Calibration Log

Project/Site Name: AOC50 Well Installation

Instrument: Lamotte 2020we

Calibrated By: BMA

Serial Number: 18665-092

Date	Pre-Cal 0 NTU AM	Post-Cal 0 NTU AM	Pre-Cal 10 NTU AM	Post-Cal 10 NTU AM	Pre-Cal 0 NTU PM	Post-Cal 0 NTU PM	Pre-Cal 10 NTU PM	Post-Cal 10 NTU PM
1/14/19	0.02	0.00	10.9	10.0	0.09	0.00	9.70	10.0

Post Calibration Criteria			
-	-	± 0.5	Variance Noted: N/A

Signature: [signature]

Date: 1/14/19

A.5

Winter 2019 Hydraulic Conductivity Test Results for New Monitoring Wells

KGS

Measuring K While Low Flow Sampling
AOC 50 - Delineation of VOC Plume
Devens, Massachusetts

Date	Well ID	Time (5 minute intervals)	Flow Rate ml/min	DTW (ft bTOC) in monitoring well
1/14/2019	**G6M-18-01**	0 1100	200	static = 57.90 ft bTOC TOR
DTB =	ft bTOC TOR	5 1105	200	58.00
(Record for Sample Collection)		10 1110	200	58.00
Stick Up =		15 1115	200	58.00
	Flush MT.	20 1120	200	58.00
		25 1125	200	58.00
		30 1130	200	58.00
		35 1135	200	58.00
		40 1140	200	58.00
		45 1145	200	58.00
1/14/2019	G6M-18-01	0 1215	300	58.00
		5 1220	300	58.02
		10 1225	300	58.05
		15 1230	300	58.05
		20 1235	300	58.05
1/14/2019	G6M-18-01	0 1240	400	58.10
		5 1245	400	58.10
		10 1250	400	58.10
		15 1255	400	58.10
		20 1300	400	58.10
1/14/2019	**G6M-18-02**	0 0845	200	static = 63.79 ft bTOC
DTB =	ft bTOC TOR	5	200	63.81
(Record for Sample Collection)		10	200	63.81
Stick Up: PVC = 22"		15	200	63.81
	Steel casing =	20	200	63.81
		25	200	63.81
		30	200	63.81
		35	200	63.81
		40	200	63.81
		45	200	63.81
1/14/2019	G6M-18-02	0 0930	300	63.85
		5	300	63.95
		10	300	63.95
		15	300	63.95
		20	300	63.95
1/14/2019	G6M-18-02	0 0955	400	63.95
		5	400	64.00
		10	400	64.01
		15	400	64.01
		20	400	64.01

1015

Total Purged = 6 gallons

Ellipsoidal Flow Steady State Model

Site Information	
Site	AOC50
Sampler No.	G6M-18-01
Date	01/14/19
Personnel	RM

Sampler Information	
P-transducer reading at start (cm):	zero
Saturated screen length [**L**] (cm):	304.80
Well Intake diameter [D] (cm)*:	5.080

Test	Steady State Drawdown (cm)	Steady State Discharge (L/Min)
Test 1	3.1	0.2
Test 2	7.60	0.3
Test 3	9.10	0.4

slope (Q/H)=	0.030769231	L/min/cm
Intercept=	9.69E-02	cm
r2 =	0.9608	
K=	**1.28E-03**	**cm/s**
K=	**3.63E+00**	**ft/day**

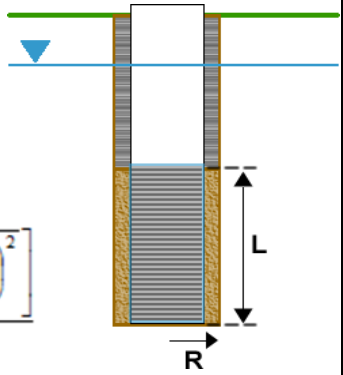
Formula

$$Q = \frac{2\pi LKH}{2.303 \log\left[\frac{L}{D} + \sqrt{1 + \left(\frac{L}{D}\right)^2}\right]}$$

Regression

$$Q = slope * H$$

$$K = \frac{slope * 2.303 \log\left[\frac{L}{D} + \sqrt{1 + \left(\frac{L}{D}\right)^2}\right]}{2\pi L}$$



Model Based on Hvorslev (1951)

*This workbook can be used with the half ellipsoidal model by subsitituting the intake hole radius (R) instead of the intake hole diameter (D).

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Ellipsoidal Flow Steady State Model

Site Information	
Site	AOC50
Sampler No.	G6M-18-02
Date	01/14/19
Personnel	RM

Sampler Information	
P-transducer reading at start (cm):	zero
Saturated screen length [**L**] (cm):	304.80
Well Intake diameter [D] (cm)*:	5.080

Test	Steady State Drawdown (cm)	Steady State Discharge (L/Min)
Test 1	0.61	0.2
Test 2	5.49	0.3
Test 3	7.32	0.4

slope (Q/H)=	0.027885753	L/min/cm
Intercept=	1.75E-01	cm
r2 =	0.9672	
K=	**1.16E-03**	**cm/s**
K=	**3.29E+00**	**ft/day**

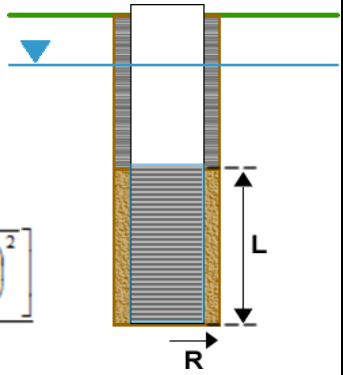
Formula

$$Q = \frac{2\pi LKH}{2.303 \log\left[\frac{L}{D} + \sqrt{1 + \left(\frac{L}{D}\right)^2}\right]}$$

Regression

$$Q = slope * H$$

$$K = \frac{slope * 2.303 \log\left[\frac{L}{D} + \sqrt{1 + \left(\frac{L}{D}\right)^2}\right]}{2\pi L}$$



Model Based on Hvorslev (1951)

*This workbook can be used with the half ellipsoidal model by subsitituting the intake hole radius (R) instead of the intake hole diameter (D).

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APPENDIX B
LABORATORY ANALYTICAL REPORTS
(on CD)

B.1

Spring 2018 LTM Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-150689-1
Client Project/Site: Fort Devens / AOC50 Spring 2018

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
4/20/2018 1:40:45 PM

Jerry Lanier, Project Manager I
(912)354-7858 e.3410
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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.

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Job ID: 680-150689-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC50 Spring 2018

Report Number: 680-150689-1

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 04/05/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.5º C and 3.4º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples Trip Blank_040318 (680-150689-1), XSA-12-96X-SPR18 (680-150689-2), G6M-04-07X-SPR18 (680-150689-3), G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/09/2018 and 04/10/2018.

Samples G6M-97-05B-SPR18 (680-150689-4)[2X], G6M-04-02X-SPR18 (680-150689-6)[2X], G6M-07-02X-SPR18 (680-150689-7)[5X] and G6M-DUP01-SPR18 (680-150689-8)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-519231, 680-519236, and 680-519392.

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

DISSOLVED GASES

Samples G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 04/06/2018 and 04/11/2018.

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

METALS (ICP) - DISSOLVED

Samples XSA-12-96X-SPR18 (680-150689-2), G6M-04-07X-SPR18 (680-150689-3), G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9) and G6M-13-01X-SPR18 (680-150689-10) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/09/2018 and 04/10/2018 and analyzed on 04/10/2018 and 04/11/2018.

Iron and Manganese failed the recovery criteria low for the MS/MSD of sample G6M-DUP01-SPR18 (680-150689-8) in batch 680-519618.

Refer to the QC report for details.

Job ID: 680-150689-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

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

METALS (ICP)

Sample RB-01-SPR18 (680-150689-11) was analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared and analyzed on 04/06/2018.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The interference check standard solution (ICSA) associated with batch 680-519271 had a manganese result at a level greater than the limit of detection (LOD). The sample was below the LOD. Data was flagged and reported.

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 XSA-12-96X-SPR18 (680-150689-2), G6M-04-07X-SPR18 (680-150689-3), G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9) and G6M-13-01X-SPR18 (680-150689-10) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 04/09/2018 and 04/10/2018 and analyzed on 04/10/2018 and 04/11/2018.

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

METALS

Sample RB-01-SPR18 (680-150689-11) was analyzed for Metals in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 04/06/2018.

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

ALKALINITY

Samples G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 04/06/2018.

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

NITRATE-NITRITE AS NITROGEN

Samples G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 04/16/2018 and 04/18/2018.

Nitrate/Nitrite-N failed the recovery criteria high for the MS of sample G6M-13-01X-SPR18MS (680-150689-10) in batch 280-411876.

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-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18

Job ID: 680-150689-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

(680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 04/09/2018.

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-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 04/09/2018 and 04/16/2018.

Samples G6M-07-02X-SPR18 (680-150689-7)[10X], G6M-DUP01-SPR18 (680-150689-8)[10X] and G6M-04-10A-SPR18 (680-150689-9) [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

Samples G6M-97-05B-SPR18 (680-150689-4), G6M-13-02X-SPR18 (680-150689-5), G6M-04-02X-SPR18 (680-150689-6), G6M-07-02X-SPR18 (680-150689-7), G6M-DUP01-SPR18 (680-150689-8), G6M-04-10A-SPR18 (680-150689-9), G6M-13-01X-SPR18 (680-150689-10) and RB-01-SPR18 (680-150689-11) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 04/13/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-411274/35 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.

Samples G6M-07-02X-SPR18 (680-150689-7)[20.83X] and G6M-DUP01-SPR18 (680-150689-8)[13.16X] 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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-150689-1	Trip Blank_040318	Water	04/03/18 00:00	04/05/18 09:10
680-150689-2	XSA-12-96X-SPR18	Water	04/03/18 10:15	04/05/18 09:10
680-150689-3	G6M-04-07X-SPR18	Water	04/03/18 11:25	04/05/18 09:10
680-150689-4	G6M-97-05B-SPR18	Water	04/03/18 13:00	04/05/18 09:10
680-150689-5	G6M-13-02X-SPR18	Water	04/03/18 14:45	04/05/18 09:10
680-150689-6	G6M-04-02X-SPR18	Water	04/03/18 16:30	04/05/18 09:10
680-150689-7	G6M-07-02X-SPR18	Water	04/04/18 09:05	04/05/18 09:10
680-150689-8	G6M-DUP01-SPR18	Water	04/04/18 09:10	04/05/18 09:10
680-150689-9	G6M-04-10A-SPR18	Water	04/04/18 10:35	04/05/18 09:10
680-150689-10	G6M-13-01X-SPR18	Water	04/04/18 12:45	04/05/18 09:10
680-150689-11	RB-01-SPR18	Water	04/04/18 13:45	04/05/18 09:10

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

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
3010A	Preparation, Total 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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
D	The reported value is from a dilution.

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
D	The reported value is from a dilution.

Metals

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

General Chemistry

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

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)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

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)

Client Sample ID: Trip Blank_040318
Date Collected: 04/03/18 00:00
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 12:36	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 12:36	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 12:36	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 12:36	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 12:36	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 12:36	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 12:36	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 12:36	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 12:36	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 12:36	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 12:36	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 12:36	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 12:36	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 12:36	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/09/18 12:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 12:36	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 12:36	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 12:36	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 12:36	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 12:36	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 12:36	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 12:36	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 12:36	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 12:36	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 12:36	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 12:36	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/09/18 12:36	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 12:36	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 12:36	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 12:36	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 12:36	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 12:36	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 12:36	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 12:36	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 12:36	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 12:36	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 12:36	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 12:36	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 12:36	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 12:36	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 12:36	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 12:36	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 12:36	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 12:36	1

Client Sample ID: Trip Blank_040318

Lab Sample ID: 680-150689-1

Date Collected: 04/03/18 00:00

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 12:36	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 12:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 12:36	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/09/18 12:36	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 12:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 12:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 12:36	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 12:36	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 12:36	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 12:36	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 12:36	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 12:36	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 12:36	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 12:36	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 12:36	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 12:36	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 12:36	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 12:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*04/09/18 12:36*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*04/09/18 12:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*04/09/18 12:36*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*04/09/18 12:36*	*1*

Client Sample ID: XSA-12-96X-SPR18

Lab Sample ID: 680-150689-2

Date Collected: 04/03/18 10:15

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 13:50	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		04/09/18 13:50	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 13:50	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 13:50	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 13:50	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 13:50	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 13:50	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 13:50	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 13:50	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 13:50	1
Chloroethane	**4.8**	**J**	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 13:50	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 13:50	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 13:50	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 13:50	1
cis-1,2-Dichloroethene	**23**		1.0	1.0	0.41	ug/L		04/09/18 13:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 13:50	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: XSA-12-96X-SPR18
Date Collected: 04/03/18 10:15
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 13:50	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 13:50	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 13:50	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 13:50	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 13:50	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 13:50	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 13:50	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 13:50	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 13:50	1
1,1-Dichloroethene	**0.69**	**J M**	1.0	1.0	0.36	ug/L		04/09/18 13:50	1
1,2-Dichloroethene, Total	**29**		2.0	1.0	0.74	ug/L		04/09/18 13:50	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 13:50	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 13:50	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 13:50	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 13:50	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 13:50	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 13:50	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 13:50	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 13:50	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 13:50	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 13:50	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 13:50	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 13:50	1
Naphthalene	5.0	U M	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 13:50	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 13:50	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 13:50	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 13:50	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 13:50	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 13:50	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 13:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 13:50	1
Tetrachloroethene	**27**		1.0	1.0	0.74	ug/L		04/09/18 13:50	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 13:50	1
trans-1,2-Dichloroethene	**5.7**		1.0	1.0	0.37	ug/L		04/09/18 13:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 13:50	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 13:50	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 13:50	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 13:50	1
Trichloroethene	**22**		1.0	1.0	0.48	ug/L		04/09/18 13:50	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 13:50	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 13:50	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 13:50	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 13:50	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 13:50	1
Vinyl chloride	**16**		1.0	1.0	0.50	ug/L		04/09/18 13:50	1

Client Sample ID: XSA-12-96X-SPR18

Lab Sample ID: 680-150689-2

Date Collected: 04/03/18 10:15

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*04/09/18 13:50*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*04/09/18 13:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*04/09/18 13:50*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*04/09/18 13:50*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3200**		50	50	17	ug/L		04/11/18 15:55	1
Manganese	**4400**		10	3.0	1.0	ug/L		04/11/18 15:55	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/11/18 11:17	1

Client Sample ID: G6M-04-07X-SPR18

Lab Sample ID: 680-150689-3

Date Collected: 04/03/18 11:25

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**7.9**	**J**	10	10	7.0	ug/L		04/09/18 14:15	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		04/09/18 14:15	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:15	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:15	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 14:15	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 14:15	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 14:15	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:15	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 14:15	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
Chloroform	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:15	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:15	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:15	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:15	1
cis-1,2-Dichloroethene	**7.7**		1.0	1.0	0.41	ug/L		04/09/18 14:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 14:15	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:15	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:15	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:15	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 14:15	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:15	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 14:15	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:15	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:15	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-04-07X-SPR18
Date Collected: 04/03/18 11:25
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 14:15	1
1,2-Dichloroethene, Total	**7.7**		2.0	1.0	0.74	ug/L		04/09/18 14:15	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 14:15	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:15	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:15	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:15	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:15	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 14:15	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:15	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:15	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 14:15	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 14:15	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:15	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:15	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:15	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 14:15	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:15	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:15	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:15	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 14:15	1
Tetrachloroethene	**4.2**		1.0	1.0	0.74	ug/L		04/09/18 14:15	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:15	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:15	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:15	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:15	1
Trichloroethene	**3.4**		1.0	1.0	0.48	ug/L		04/09/18 14:15	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:15	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 14:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:15	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 14:15	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 14:15	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:15	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/09/18 14:15*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*04/09/18 14:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*04/09/18 14:15*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*04/09/18 14:15*	*1*

Client Sample ID: G6M-04-07X-SPR18

Lab Sample ID: 680-150689-3

Date Collected: 04/03/18 11:25

Matrix: Water

Date Received: 04/05/18 09:10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/11/18 16:00	1
Manganese	**2100**		10	3.0	1.0	ug/L		04/11/18 16:00	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**7.2**		3.0	3.0	1.5	ug/L		04/11/18 11:20	1

Client Sample ID: G6M-97-05B-SPR18

Lab Sample ID: 680-150689-4

Date Collected: 04/03/18 13:00

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 14:39	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:39	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:39	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:39	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 14:39	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 14:39	1
Carbon tetrachloride	**0.60**	**J M**	1.0	0.50	0.33	ug/L		04/09/18 14:39	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 14:39	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:39	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 14:39	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
Chloroform	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:39	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:39	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:39	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:39	1
cis-1,2-Dichloroethene	**9.0**		1.0	1.0	0.41	ug/L		04/09/18 14:39	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:39	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 14:39	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:39	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:39	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:39	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 14:39	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:39	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 14:39	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:39	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:39	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 14:39	1
1,2-Dichloroethene, Total	**9.0**		2.0	1.0	0.74	ug/L		04/09/18 14:39	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 14:39	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:39	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:39	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:39	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:39	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:39	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 14:39	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-97-05B-SPR18
Date Collected: 04/03/18 13:00
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:39	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:39	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 14:39	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 14:39	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:39	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:39	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:39	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 14:39	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:39	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:39	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:39	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 14:39	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:39	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:39	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:39	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:39	1
1,1,2-Trichloroethane	0.50	U M	1.0	0.50	0.33	ug/L		04/09/18 14:39	1
Trichloroethene	**19**		1.0	1.0	0.48	ug/L		04/09/18 14:39	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:39	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 14:39	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:39	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 14:39	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 14:39	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:39	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/09/18 14:39*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*04/09/18 14:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*		*04/09/18 14:39*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*04/09/18 14:39*	*1*

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	**240**	**D**	2.0	2.0	1.5	ug/L		04/10/18 13:48	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/10/18 13:48*	*2*
Dibromofluoromethane (Surr)	*108*		*80 - 119*		*04/10/18 13:48*	*2*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*04/10/18 13:48*	*2*
Toluene-d8 (Surr)	*92*		*89 - 112*		*04/10/18 13:48*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/06/18 17:07	1

Client Sample ID: G6M-97-05B-SPR18

Lab Sample ID: 680-150689-4

Date Collected: 04/03/18 13:00

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/06/18 17:07	1
Methane	**34**		0.58	0.58	0.29	ug/L		04/06/18 17:07	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**7.4**		1.0	1.0	0.40	mg/L		04/09/18 17:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/11/18 16:05	1
Manganese	**1.4**	**J**	10	3.0	1.0	ug/L		04/11/18 16:05	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/11/18 11:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.79**		0.10	0.050	0.019	mg/L		04/16/18 19:54	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**1.5**		1.0	0.50	0.16	mg/L		04/13/18 10:51	1
Alkalinity	**33**		5.0	3.2	1.1	mg/L		04/06/18 20:08	1

Client Sample ID: G6M-13-02X-SPR18

Lab Sample ID: 680-150689-5

Date Collected: 04/03/18 14:45

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**7.2**	**J**	10	10	7.0	ug/L		04/09/18 15:04	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:04	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 15:04	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:04	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 15:04	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 15:04	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 15:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 15:04	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:04	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 15:04	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 15:04	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 15:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 15:04	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:04	1
cis-1,2-Dichloroethene	**15**		1.0	1.0	0.41	ug/L		04/09/18 15:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 15:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 15:04	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:04	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:04	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:04	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-13-02X-SPR18
Date Collected: 04/03/18 14:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 15:04	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 15:04	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 15:04	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 15:04	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 15:04	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 15:04	1
1,2-Dichloroethene, Total	**15**		2.0	1.0	0.74	ug/L		04/09/18 15:04	1
1,2-Dichloropropane	1.0	U M	1.0	1.0	0.67	ug/L		04/09/18 15:04	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 15:04	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:04	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 15:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 15:04	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 15:04	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 15:04	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:04	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 15:04	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 15:04	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 15:04	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:04	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 15:04	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 15:04	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 15:04	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:04	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 15:04	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:04	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 15:04	1
Tetrachloroethene	**58**		1.0	1.0	0.74	ug/L		04/09/18 15:04	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 15:04	1
trans-1,2-Dichloroethene	**0.65**	**J**	1.0	1.0	0.37	ug/L		04/09/18 15:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:04	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:04	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:04	1
1,1,2-Trichloroethane	0.50	U M	1.0	0.50	0.33	ug/L		04/09/18 15:04	1
Trichloroethene	**11**		1.0	1.0	0.48	ug/L		04/09/18 15:04	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:04	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 15:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 15:04	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 15:04	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 15:04	1
Vinyl chloride	**1.1**	**M**	1.0	1.0	0.50	ug/L		04/09/18 15:04	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*04/09/18 15:04*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*04/09/18 15:04*	*1*

Client Sample ID: G6M-13-02X-SPR18

Lab Sample ID: 680-150689-5

Date Collected: 04/03/18 14:45

Matrix: Water

Date Received: 04/05/18 09:10

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*04/09/18 15:04*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*04/09/18 15:04*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/06/18 17:20	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/06/18 17:20	1
Methane (TCD)	**6300**		390	77	39	ug/L		04/06/18 17:20	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**11**		1.0	1.0	0.40	mg/L		04/09/18 17:38	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**160**		50	50	17	ug/L		04/11/18 16:10	1
Manganese	**54**		10	3.0	1.0	ug/L		04/11/18 16:10	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/11/18 11:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.35**		0.10	0.050	0.019	mg/L		04/16/18 20:00	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**6.8**		1.0	0.50	0.16	mg/L		04/13/18 12:15	1
Alkalinity	**53**		5.0	3.2	1.1	mg/L		04/06/18 20:33	1

Client Sample ID: G6M-04-02X-SPR18

Lab Sample ID: 680-150689-6

Date Collected: 04/03/18 16:30

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	20	U	20	20	14	ug/L		04/09/18 15:29	2
Benzene	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 15:29	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		04/09/18 15:29	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 15:29	2
Bromomethane	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
2-Butanone (MEK)	20	U	20	20	6.8	ug/L		04/09/18 15:29	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		04/09/18 15:29	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		04/09/18 15:29	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		04/09/18 15:29	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 15:29	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		04/09/18 15:29	2
Chloroethane	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		04/09/18 15:29	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		04/09/18 15:29	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		04/09/18 15:29	2

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-04-02X-SPR18
Date Collected: 04/03/18 16:30
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 15:29	2
cis-1,2-Dichloroethene	**19**	**D**	2.0	2.0	0.82	ug/L		04/09/18 15:29	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		04/09/18 15:29	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		04/09/18 15:29	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		04/09/18 15:29	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 15:29	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 15:29	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		04/09/18 15:29	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		04/09/18 15:29	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		04/09/18 15:29	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		04/09/18 15:29	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		04/09/18 15:29	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		04/09/18 15:29	2
1,2-Dichloroethene, Total	**19**	**D**	4.0	2.0	1.5	ug/L		04/09/18 15:29	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		04/09/18 15:29	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		04/09/18 15:29	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 15:29	2
1,1-Dichloropropene	2.0	U	2.0	2.0	0.68	ug/L		04/09/18 15:29	2
Ethylbenzene	1.0	U	2.0	1.0	0.66	ug/L		04/09/18 15:29	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		04/09/18 15:29	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
2-Hexanone	10	U	20	10	4.0	ug/L		04/09/18 15:29	2
Isopropylbenzene	2.0	U	2.0	2.0	0.70	ug/L		04/09/18 15:29	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		04/09/18 15:29	2
Methylene Chloride	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
4-Methyl-2-pentanone (MIBK)	10	U	20	10	4.2	ug/L		04/09/18 15:29	2
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		04/09/18 15:29	2
m-Xylene & p-Xylene	2.0	U	2.0	2.0	0.70	ug/L		04/09/18 15:29	2
Naphthalene	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
n-Butylbenzene	2.0	U	2.0	2.0	0.94	ug/L		04/09/18 15:29	2
N-Propylbenzene	2.0	U	2.0	2.0	0.76	ug/L		04/09/18 15:29	2
o-Xylene	1.0	U	2.0	1.0	0.46	ug/L		04/09/18 15:29	2
sec-Butylbenzene	2.0	U	2.0	2.0	0.84	ug/L		04/09/18 15:29	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		04/09/18 15:29	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 15:29	2
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 15:29	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		04/09/18 15:29	2
Tetrachloroethene	**300**	**D**	2.0	2.0	1.5	ug/L		04/09/18 15:29	2
Toluene	2.0	U	2.0	2.0	0.96	ug/L		04/09/18 15:29	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 15:29	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		04/09/18 15:29	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		04/09/18 15:29	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 15:29	2
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.66	ug/L		04/09/18 15:29	2
Trichloroethene	**74**	**D**	2.0	2.0	0.96	ug/L		04/09/18 15:29	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		04/09/18 15:29	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		04/09/18 15:29	2
1,2,4-Trimethylbenzene	2.0	U	2.0	2.0	0.94	ug/L		04/09/18 15:29	2

Client Sample ID: G6M-04-02X-SPR18

Lab Sample ID: 680-150689-6

Date Collected: 04/03/18 16:30

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.62	ug/L		04/09/18 15:29	2
Vinyl acetate	4.0	U	4.0	4.0	1.6	ug/L		04/09/18 15:29	2
Vinyl chloride	**1.7**	**J D M**	2.0	2.0	1.0	ug/L		04/09/18 15:29	2
Xylenes, Total	1.0	U	4.0	1.0	0.46	ug/L		04/09/18 15:29	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*04/09/18 15:29*	*2*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*04/09/18 15:29*	*2*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*04/09/18 15:29*	*2*
Toluene-d8 (Surr)	*102*		*89 - 112*		*04/09/18 15:29*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/06/18 17:33	1
Ethylene	**3.4**		1.0	1.0	0.50	ug/L		04/06/18 17:33	1
Methane (TCD)	**23000**		390	77	39	ug/L		04/06/18 17:33	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**11**		1.0	1.0	0.40	mg/L		04/16/18 14:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**30000**		50	50	17	ug/L		04/11/18 16:16	1
Manganese	**9800**		10	3.0	1.0	ug/L		04/11/18 16:16	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**99**		3.0	3.0	1.5	ug/L		04/11/18 11:38	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.10**		0.10	0.050	0.019	mg/L		04/16/18 20:02	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**2.5**		1.0	0.50	0.16	mg/L		04/13/18 13:13	1
Alkalinity	**120**		5.0	3.2	1.1	mg/L		04/06/18 20:40	1

Client Sample ID: G6M-07-02X-SPR18

Lab Sample ID: 680-150689-7

Date Collected: 04/04/18 09:05

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	50	U M	50	50	35	ug/L		04/10/18 13:26	5
Benzene	5.0	U	5.0	5.0	2.2	ug/L		04/10/18 13:26	5
Bromobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 13:26	5
Bromoform	5.0	U	5.0	5.0	2.2	ug/L		04/10/18 13:26	5
Bromomethane	25	U	25	25	13	ug/L		04/10/18 13:26	5
2-Butanone (MEK)	**61**	**D**	50	50	17	ug/L		04/10/18 13:26	5
Carbon disulfide	10	U	10	10	2.2	ug/L		04/10/18 13:26	5
Carbon tetrachloride	2.5	U	5.0	2.5	1.7	ug/L		04/10/18 13:26	5

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-07-02X-SPR18
Date Collected: 04/04/18 09:05
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorobenzene	2.5	U	5.0	2.5	1.3	ug/L		04/10/18 13:26	5
Chlorobromomethane	5.0	U	5.0	5.0	2.3	ug/L		04/10/18 13:26	5
Chlorodibromomethane	2.5	U	5.0	2.5	1.6	ug/L		04/10/18 13:26	5
Chloroethane	25	U	25	25	13	ug/L		04/10/18 13:26	5
Chloroform	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 13:26	5
Chloromethane	5.0	U	5.0	5.0	2.0	ug/L		04/10/18 13:26	5
2-Chlorotoluene	2.5	U	5.0	2.5	1.4	ug/L		04/10/18 13:26	5
4-Chlorotoluene	5.0	U	5.0	5.0	2.3	ug/L		04/10/18 13:26	5
cis-1,2-Dichloroethene	**33**	**D**	5.0	5.0	2.1	ug/L		04/10/18 13:26	5
cis-1,3-Dichloropropene	5.0	U	5.0	5.0	2.0	ug/L		04/10/18 13:26	5
1,2-Dibromo-3-Chloropropane	10	U	25	10	5.5	ug/L		04/10/18 13:26	5
Dibromomethane	5.0	U	5.0	5.0	1.8	ug/L		04/10/18 13:26	5
1,2-Dichlorobenzene	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
1,3-Dichlorobenzene	5.0	U	5.0	5.0	2.2	ug/L		04/10/18 13:26	5
1,4-Dichlorobenzene	5.0	U	5.0	5.0	2.3	ug/L		04/10/18 13:26	5
Dichlorobromomethane	5.0	U	5.0	5.0	2.2	ug/L		04/10/18 13:26	5
Dichlorodifluoromethane	5.0	U	5.0	5.0	3.0	ug/L		04/10/18 13:26	5
1,1-Dichloroethane	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
1,2-Dichloroethane	5.0	U M	5.0	5.0	2.5	ug/L		04/10/18 13:26	5
1,1-Dichloroethene	5.0	U	5.0	5.0	1.8	ug/L		04/10/18 13:26	5
1,2-Dichloroethene, Total	**33**	**D**	10	5.0	3.7	ug/L		04/10/18 13:26	5
1,2-Dichloropropane	5.0	U	5.0	5.0	3.4	ug/L		04/10/18 13:26	5
1,3-Dichloropropane	5.0	U	5.0	5.0	1.7	ug/L		04/10/18 13:26	5
2,2-Dichloropropane	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
1,1-Dichloropropene	5.0	U	5.0	5.0	1.7	ug/L		04/10/18 13:26	5
Ethylbenzene	2.5	U	5.0	2.5	1.7	ug/L		04/10/18 13:26	5
Ethylene Dibromide	5.0	U	5.0	5.0	2.2	ug/L		04/10/18 13:26	5
Hexachlorobutadiene	25	U	25	25	13	ug/L		04/10/18 13:26	5
2-Hexanone	25	U M	50	25	10	ug/L		04/10/18 13:26	5
Isopropylbenzene	5.0	U	5.0	5.0	1.8	ug/L		04/10/18 13:26	5
4-Isopropyltoluene	5.0	U	5.0	5.0	2.4	ug/L		04/10/18 13:26	5
Methylene Chloride	25	U	25	25	13	ug/L		04/10/18 13:26	5
4-Methyl-2-pentanone (MIBK)	25	U	50	25	11	ug/L		04/10/18 13:26	5
Methyl tert-butyl ether	2.5	U	50	2.5	1.5	ug/L		04/10/18 13:26	5
m-Xylene & p-Xylene	5.0	U	5.0	5.0	1.8	ug/L		04/10/18 13:26	5
Naphthalene	25	U	25	25	13	ug/L		04/10/18 13:26	5
n-Butylbenzene	**3.6**	**J D**	5.0	5.0	2.4	ug/L		04/10/18 13:26	5
N-Propylbenzene	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
o-Xylene	2.5	U	5.0	2.5	1.2	ug/L		04/10/18 13:26	5
sec-Butylbenzene	5.0	U	5.0	5.0	2.1	ug/L		04/10/18 13:26	5
Styrene	2.5	U	5.0	2.5	1.4	ug/L		04/10/18 13:26	5
tert-Butylbenzene	5.0	U	5.0	5.0	2.3	ug/L		04/10/18 13:26	5
1,1,1,2-Tetrachloroethane	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	3.1	ug/L		04/10/18 13:26	5
Tetrachloroethene	**350**	**D**	5.0	5.0	3.7	ug/L		04/10/18 13:26	5
Toluene	5.0	U	5.0	5.0	2.4	ug/L		04/10/18 13:26	5
trans-1,2-Dichloroethene	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
trans-1,3-Dichloropropene	5.0	U	5.0	5.0	2.1	ug/L		04/10/18 13:26	5
1,2,3-Trichlorobenzene	25	U	25	25	13	ug/L		04/10/18 13:26	5

Client Sample ID: G6M-07-02X-SPR18

Lab Sample ID: 680-150689-7

Date Collected: 04/04/18 09:05

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	25	U	25	25	13	ug/L		04/10/18 13:26	5
1,1,1-Trichloroethane	5.0	U	5.0	5.0	1.9	ug/L		04/10/18 13:26	5
1,1,2-Trichloroethane	2.5	U M	5.0	2.5	1.7	ug/L		04/10/18 13:26	5
Trichloroethene	5.0	U	5.0	5.0	2.4	ug/L		04/10/18 13:26	5
Trichlorofluoromethane	5.0	U	5.0	5.0	2.1	ug/L		04/10/18 13:26	5
1,2,3-Trichloropropane	5.0	U	5.0	5.0	2.0	ug/L		04/10/18 13:26	5
1,2,4-Trimethylbenzene	**2.7**	**J D**	5.0	5.0	2.4	ug/L		04/10/18 13:26	5
1,3,5-Trimethylbenzene	2.5	U M	5.0	2.5	1.6	ug/L		04/10/18 13:26	5
Vinyl acetate	10	U	10	10	4.1	ug/L		04/10/18 13:26	5
Vinyl chloride	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 13:26	5
Xylenes, Total	2.5	U	10	2.5	1.2	ug/L		04/10/18 13:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/10/18 13:26*	*5*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*04/10/18 13:26*	*5*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*04/10/18 13:26*	*5*
Toluene-d8 (Surr)	*97*		*89 - 112*		*04/10/18 13:26*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**10**		1.1	1.1	0.55	ug/L		04/11/18 12:25	1
Ethylene	**17**		1.0	1.0	0.50	ug/L		04/11/18 12:25	1
Methane (TCD)	**25000**		390	77	39	ug/L		04/11/18 12:25	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	10	U M	10	10	4.0	mg/L		04/09/18 16:46	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**85000**		50	50	17	ug/L		04/11/18 16:31	1
Manganese	**2800**		10	3.0	1.0	ug/L		04/11/18 16:31	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**89**		3.0	3.0	1.5	ug/L		04/11/18 11:41	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.13**		0.10	0.050	0.019	mg/L		04/16/18 20:04	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**580**		21	10	3.2	mg/L		04/13/18 10:31	20.83
Alkalinity	**150**		5.0	3.2	1.1	mg/L		04/06/18 20:59	1

Client Sample ID: G6M-DUP01-SPR18

Lab Sample ID: 680-150689-8

Date Collected: 04/04/18 09:10

Matrix: Water

Date Received: 04/05/18 09:10

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**680**	**D**	20	20	14	ug/L		04/09/18 14:04	2

Client Sample ID: G6M-DUP01-SPR18
Date Collected: 04/04/18 09:10
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 14:04	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		04/09/18 14:04	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 14:04	2
Bromomethane	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
2-Butanone (MEK)	**76**	**D**	20	20	6.8	ug/L		04/09/18 14:04	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		04/09/18 14:04	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		04/09/18 14:04	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		04/09/18 14:04	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 14:04	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		04/09/18 14:04	2
Chloroethane	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		04/09/18 14:04	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		04/09/18 14:04	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		04/09/18 14:04	2
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 14:04	2
cis-1,2-Dichloroethene	**30**	**D**	2.0	2.0	0.82	ug/L		04/09/18 14:04	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		04/09/18 14:04	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		04/09/18 14:04	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		04/09/18 14:04	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 14:04	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		04/09/18 14:04	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		04/09/18 14:04	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		04/09/18 14:04	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		04/09/18 14:04	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		04/09/18 14:04	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		04/09/18 14:04	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		04/09/18 14:04	2
1,2-Dichloroethene, Total	**30**	**D**	4.0	2.0	1.5	ug/L		04/09/18 14:04	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		04/09/18 14:04	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		04/09/18 14:04	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 14:04	2
1,1-Dichloropropene	2.0	U	2.0	2.0	0.68	ug/L		04/09/18 14:04	2
Ethylbenzene	1.0	U	2.0	1.0	0.66	ug/L		04/09/18 14:04	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		04/09/18 14:04	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
2-Hexanone	10	U M	20	10	4.0	ug/L		04/09/18 14:04	2
Isopropylbenzene	2.0	U	2.0	2.0	0.70	ug/L		04/09/18 14:04	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		04/09/18 14:04	2
Methylene Chloride	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
4-Methyl-2-pentanone (MIBK)	10	U M	20	10	4.2	ug/L		04/09/18 14:04	2
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		04/09/18 14:04	2
m-Xylene & p-Xylene	**1.5**	**J D**	2.0	2.0	0.70	ug/L		04/09/18 14:04	2
Naphthalene	**6.8**	**J D**	10	10	5.0	ug/L		04/09/18 14:04	2
n-Butylbenzene	**3.6**	**D**	2.0	2.0	0.94	ug/L		04/09/18 14:04	2
N-Propylbenzene	**0.80**	**J D**	2.0	2.0	0.76	ug/L		04/09/18 14:04	2
o-Xylene	**0.93**	**J D**	2.0	1.0	0.46	ug/L		04/09/18 14:04	2
sec-Butylbenzene	2.0	U M	2.0	2.0	0.84	ug/L		04/09/18 14:04	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		04/09/18 14:04	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		04/09/18 14:04	2

Client Sample ID: G6M-DUP01-SPR18
Date Collected: 04/04/18 09:10
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 14:04	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		04/09/18 14:04	2
Tetrachloroethene	**360**	**D**	2.0	2.0	1.5	ug/L		04/09/18 14:04	2
Toluene	**1.1**	**J D**	2.0	2.0	0.96	ug/L		04/09/18 14:04	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 14:04	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		04/09/18 14:04	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		04/09/18 14:04	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		04/09/18 14:04	2
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.66	ug/L		04/09/18 14:04	2
Trichloroethene	**2.6**	**D**	2.0	2.0	0.96	ug/L		04/09/18 14:04	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		04/09/18 14:04	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		04/09/18 14:04	2
1,2,4-Trimethylbenzene	**3.1**	**D**	2.0	2.0	0.94	ug/L		04/09/18 14:04	2
1,3,5-Trimethylbenzene	**0.71**	**J D**	2.0	1.0	0.62	ug/L		04/09/18 14:04	2
Vinyl acetate	4.0	U M	4.0	4.0	1.6	ug/L		04/09/18 14:04	2
Vinyl chloride	**1.7**	**J D**	2.0	2.0	1.0	ug/L		04/09/18 14:04	2
Xylenes, Total	**2.4**	**J**	4.0	1.0	0.46	ug/L		04/09/18 14:04	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*04/09/18 14:04*	*2*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*04/09/18 14:04*	*2*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/09/18 14:04*	*2*
Toluene-d8 (Surr)	*99*		*89 - 112*		*04/09/18 14:04*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**12**		1.1	1.1	0.55	ug/L		04/11/18 12:38	1
Ethylene	**17**		1.0	1.0	0.50	ug/L		04/11/18 12:38	1
Methane (TCD)	**33000**		390	77	39	ug/L		04/11/18 12:38	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	10	U	10	10	4.0	mg/L		04/09/18 16:59	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**82000**	**J1**	50	50	17	ug/L		04/10/18 20:58	1
Manganese	**2700**	**J1**	10	3.0	1.0	ug/L		04/10/18 20:58	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**83**		3.0	3.0	1.5	ug/L		04/10/18 15:03	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.11**		0.10	0.050	0.019	mg/L		04/16/18 20:06	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**480**		13	6.6	2.0	mg/L		04/13/18 11:49	13.16
Alkalinity	**150**		5.0	3.2	1.1	mg/L		04/06/18 21:05	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-04-10A-SPR18
Date Collected: 04/04/18 10:35
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**30**		10	10	7.0	ug/L		04/09/18 14:27	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:27	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:27	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:27	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
2-Butanone (MEK)	**3.7**	**J**	10	10	3.4	ug/L		04/09/18 14:27	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 14:27	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:27	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 14:27	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:27	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 14:27	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:27	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:27	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:27	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:27	1
cis-1,2-Dichloroethene	**0.89**	**J**	1.0	1.0	0.41	ug/L		04/09/18 14:27	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:27	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 14:27	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:27	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:27	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:27	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 14:27	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:27	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 14:27	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:27	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:27	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 14:27	1
1,2-Dichloroethene, Total	**0.89**	**J**	2.0	1.0	0.74	ug/L		04/09/18 14:27	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 14:27	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:27	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:27	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:27	1
Ethylbenzene	0.50	U M	1.0	0.50	0.33	ug/L		04/09/18 14:27	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:27	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 14:27	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:27	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:27	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 14:27	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 14:27	1
m-Xylene & p-Xylene	1.0	U M	1.0	1.0	0.35	ug/L		04/09/18 14:27	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:27	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:27	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 14:27	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:27	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:27	1

Client Sample ID: G6M-04-10A-SPR18
Date Collected: 04/04/18 10:35
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:27	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:27	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 14:27	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/09/18 14:27	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:27	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:27	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:27	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:27	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:27	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:27	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:27	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:27	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 14:27	1
1,2,4-Trimethylbenzene	1.0	U M	1.0	1.0	0.47	ug/L		04/09/18 14:27	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 14:27	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 14:27	1
Vinyl chloride	**0.60**	**J**	1.0	1.0	0.50	ug/L		04/09/18 14:27	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/09/18 14:27*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*04/09/18 14:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*04/09/18 14:27*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*04/09/18 14:27*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/11/18 12:51	1
Ethylene	**3.6**		1.0	1.0	0.50	ug/L		04/11/18 12:51	1
Methane (TCD)	**25000**		390	77	39	ug/L		04/11/18 12:51	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**11**	**D**	10	10	4.0	mg/L		04/09/18 17:12	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**98000**		50	50	17	ug/L		04/10/18 21:24	1
Manganese	**2600**		10	3.0	1.0	ug/L		04/10/18 21:24	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**250**		3.0	3.0	1.5	ug/L		04/10/18 15:20	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.17**		0.10	0.050	0.019	mg/L		04/16/18 20:08	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**19**		1.0	0.50	0.16	mg/L		04/13/18 11:29	1
Alkalinity	**190**		5.0	3.2	1.1	mg/L		04/06/18 21:12	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: G6M-13-01X-SPR18
Date Collected: 04/04/18 12:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 14:49	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:49	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:49	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:49	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 14:49	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 14:49	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:49	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 14:49	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:49	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 14:49	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:49	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:49	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:49	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:49	1
cis-1,2-Dichloroethene	**1.2**		1.0	1.0	0.41	ug/L		04/09/18 14:49	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 14:49	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 14:49	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:49	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:49	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 14:49	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 14:49	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:49	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 14:49	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:49	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 14:49	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 14:49	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.74	ug/L		04/09/18 14:49	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 14:49	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:49	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:49	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 14:49	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:49	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 14:49	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 14:49	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:49	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:49	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 14:49	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 14:49	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 14:49	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:49	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 14:49	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 14:49	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:49	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 14:49	1

Client Sample ID: G6M-13-01X-SPR18
Date Collected: 04/04/18 12:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 14:49	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 14:49	1
Tetrachloroethene	**3.4**		1.0	1.0	0.74	ug/L		04/09/18 14:49	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 14:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:49	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:49	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 14:49	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 14:49	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 14:49	1
Trichloroethene	**0.99**	**J**	1.0	1.0	0.48	ug/L		04/09/18 14:49	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 14:49	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 14:49	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 14:49	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 14:49	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 14:49	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 14:49	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/09/18 14:49*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*04/09/18 14:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/09/18 14:49*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*04/09/18 14:49*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/11/18 13:04	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 13:04	1
Methane (TCD)	**3200**		390	77	39	ug/L		04/11/18 13:04	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**15**		1.0	1.0	0.40	mg/L		04/16/18 14:26	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1500**		50	50	17	ug/L		04/10/18 21:29	1
Manganese	**260**		10	3.0	1.0	ug/L		04/10/18 21:29	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**10**		3.0	3.0	1.5	ug/L		04/10/18 15:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U J1	0.10	0.050	0.019	mg/L		04/18/18 18:34	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**1.8**		1.0	0.50	0.16	mg/L		04/13/18 10:12	1
Alkalinity	**31**		5.0	3.2	1.1	mg/L		04/06/18 21:17	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: RB-01-SPR18
Date Collected: 04/04/18 13:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 15:11	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:11	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 15:11	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:11	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 15:11	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 15:11	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 15:11	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 15:11	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:11	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 15:11	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 15:11	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 15:11	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 15:11	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/09/18 15:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 15:11	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 15:11	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:11	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:11	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 15:11	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 15:11	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 15:11	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 15:11	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 15:11	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 15:11	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 15:11	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/09/18 15:11	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 15:11	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 15:11	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:11	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 15:11	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 15:11	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 15:11	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 15:11	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:11	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 15:11	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 15:11	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 15:11	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 15:11	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 15:11	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 15:11	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 15:11	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:11	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 15:11	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Client Sample ID: RB-01-SPR18
Date Collected: 04/04/18 13:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 15:11	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 15:11	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/09/18 15:11	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 15:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:11	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 15:11	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 15:11	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 15:11	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 15:11	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 15:11	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 15:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 15:11	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 15:11	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 15:11	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 15:11	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*04/09/18 15:11*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*04/09/18 15:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/09/18 15:11*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*04/09/18 15:11*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/11/18 13:17	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 13:17	1
Methane	0.58	U M	0.58	0.58	0.29	ug/L		04/11/18 13:17	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		04/16/18 14:39	1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/06/18 23:44	1
Manganese	3.0	U Q	10	3.0	1.0	ug/L		04/06/18 23:44	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/06/18 18:10	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		04/18/18 18:40	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**0.58**	**J**	1.0	0.50	0.16	mg/L		04/13/18 11:09	1
Alkalinity	3.2	U	5.0	3.2	1.1	mg/L		04/06/18 21:24	1

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(85-114)	(80-119)	(81-118)	(89-112)
680-150689-1	Trip Blank_040318	96	96	86	102
680-150689-2	XSA-12-96X-SPR18	93	96	87	101
680-150689-3	G6M-04-07X-SPR18	95	97	87	100
680-150689-4	G6M-97-05B-SPR18	95	96	86	103
680-150689-4 - DL	G6M-97-05B-SPR18	95	108	111	92
680-150689-5	G6M-13-02X-SPR18	96	94	84	102
680-150689-6	G6M-04-02X-SPR18	93	98	91	102
680-150689-7	G6M-07-02X-SPR18	95	100	96	97
680-150689-8	G6M-DUP01-SPR18	93	97	93	99
680-150689-9	G6M-04-10A-SPR18	94	97	92	99
680-150689-10	G6M-13-01X-SPR18	95	97	93	100
680-150689-11	RB-01-SPR18	96	98	93	100
LCS 680-519231/4	Lab Control Sample	94	101	94	100
LCS 680-519236/4	Lab Control Sample	96	98	90	99
LCS 680-519392/4	Lab Control Sample	94	98	94	100
LCSD 680-519231/5	Lab Control Sample Dup	92	97	91	100
LCSD 680-519236/5	Lab Control Sample Dup	95	95	87	96
LCSD 680-519392/5	Lab Control Sample Dup	96	101	95	101
MB 680-519231/9	Method Blank	95	98	93	102
MB 680-519236/8	Method Blank	96	96	88	103
MB 680-519392/9	Method Blank	94	97	93	100

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

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

Lab Sample ID: MB 680-519231/9
Matrix: Water
Analysis Batch: 519231

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 11:29	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:29	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:29	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:29	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 11:29	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 11:29	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 11:29	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:29	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 11:29	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:29	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 11:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 11:29	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/09/18 11:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 11:29	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 11:29	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:29	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:29	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:29	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 11:29	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 11:29	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 11:29	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 11:29	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 11:29	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 11:29	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/09/18 11:29	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 11:29	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 11:29	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:29	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 11:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:29	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 11:29	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 11:29	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:29	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:29	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 11:29	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 11:29	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:29	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 11:29	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 11:29	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 11:29	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:29	1

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

Lab Sample ID: MB 680-519231/9
Matrix: Water
Analysis Batch: 519231

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 11:29	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:29	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 11:29	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/09/18 11:29	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:29	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:29	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:29	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:29	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:29	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:29	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 11:29	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 11:29	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 11:29	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 11:29	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:29	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/09/18 11:29*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*04/09/18 11:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/09/18 11:29*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*04/09/18 11:29*	*1*

Lab Sample ID: LCS 680-519231/4
Matrix: Water
Analysis Batch: 519231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	246		ug/L		98	39 - 160
Benzene	50.0	49.9		ug/L		100	79 - 120
Bromobenzene	50.0	52.1		ug/L		104	80 - 120
Bromoform	50.0	55.6		ug/L		111	66 - 130
Bromomethane	50.0	63.3		ug/L		127	53 - 141
2-Butanone (MEK)	250	250		ug/L		100	56 - 143
Carbon disulfide	50.0	50.5		ug/L		101	64 - 133
Carbon tetrachloride	50.0	49.6		ug/L		99	72 - 136
Chlorobenzene	50.0	50.1		ug/L		100	82 - 118
Chlorobromomethane	50.0	48.9		ug/L		98	78 - 123
Chlorodibromomethane	50.0	53.4		ug/L		107	74 - 126
Chloroethane	50.0	53.0		ug/L		106	60 - 138
Chloroform	50.0	49.4		ug/L		99	79 - 124
Chloromethane	50.0	54.1		ug/L		108	50 - 139
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122
4-Chlorotoluene	50.0	51.5		ug/L		103	78 - 122

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

Lab Sample ID: LCS 680-519231/4
Matrix: Water
Analysis Batch: 519231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	50.6		ug/L		101	78 - 123
cis-1,3-Dichloropropene	50.0	53.7		ug/L		107	75 - 124
1,2-Dibromo-3-Chloropropane	50.0	52.7		ug/L		105	62 - 128
Dibromomethane	50.0	48.7		ug/L		97	79 - 123
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119
1,3-Dichlorobenzene	50.0	50.3		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	49.4		ug/L		99	79 - 118
Dichlorobromomethane	50.0	51.4		ug/L		103	79 - 125
Dichlorodifluoromethane	50.0	57.7		ug/L		115	32 - 152
1,1-Dichloroethane	50.0	50.8		ug/L		102	77 - 125
1,2-Dichloroethane	50.0	49.0		ug/L		98	73 - 128
1,1-Dichloroethene	50.0	49.2		ug/L		98	71 - 131
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121
1,2-Dichloropropane	50.0	50.9		ug/L		102	78 - 122
1,3-Dichloropropane	50.0	50.6		ug/L		101	80 - 119
2,2-Dichloropropane	50.0	53.7		ug/L		107	60 - 139
1,1-Dichloropropene	50.0	50.0		ug/L		100	79 - 125
Ethylbenzene	50.0	50.8		ug/L		102	79 - 121
Ethylene Dibromide	50.0	50.9		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	52.9		ug/L		106	66 - 134
2-Hexanone	250	256		ug/L		102	57 - 139
Isopropylbenzene	50.0	51.9		ug/L		104	72 - 131
4-Isopropyltoluene	50.0	51.8		ug/L		104	77 - 127
Methylene Chloride	50.0	50.0		ug/L		100	74 - 124
4-Methyl-2-pentanone (MIBK)	250	253		ug/L		101	67 - 130
Methyl tert-butyl ether	50.0	50.5		ug/L		101	71 - 124
m-Xylene & p-Xylene	50.0	51.4		ug/L		103	80 - 121
Naphthalene	50.0	58.9		ug/L		118	61 - 128
n-Butylbenzene	50.0	51.9		ug/L		104	75 - 128
N-Propylbenzene	50.0	52.4		ug/L		105	76 - 126
o-Xylene	50.0	51.1		ug/L		102	78 - 122
sec-Butylbenzene	50.0	52.2		ug/L		104	77 - 126
Styrene	50.0	53.0		ug/L		106	78 - 123
tert-Butylbenzene	50.0	51.8		ug/L		104	78 - 124
1,1,1,2-Tetrachloroethane	50.0	52.6		ug/L		105	78 - 124
1,1,2,2-Tetrachloroethane	50.0	50.2		ug/L		100	71 - 121
Tetrachloroethene	50.0	50.4		ug/L		101	74 - 129
Toluene	50.0	50.9		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	54.2		ug/L		108	73 - 127
1,2,3-Trichlorobenzene	50.0	57.5		ug/L		115	69 - 129
1,2,4-Trichlorobenzene	50.0	51.9		ug/L		104	69 - 130
1,1,1-Trichloroethane	50.0	49.7		ug/L		99	74 - 131
1,1,2-Trichloroethane	50.0	50.4		ug/L		101	80 - 119
Trichloroethene	50.0	49.2		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	51.7		ug/L		103	65 - 141
1,2,3-Trichloropropane	50.0	50.1		ug/L		100	73 - 122
1,2,4-Trimethylbenzene	50.0	52.8		ug/L		106	76 - 124

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

Lab Sample ID: LCS 680-519231/4
Matrix: Water
Analysis Batch: 519231

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trimethylbenzene			50.0	52.6		ug/L		105	75 - 124		
Vinyl acetate			100	117		ug/L		117	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)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*
Toluene-d8 (Surr)	*100*		*89 - 112*

Lab Sample ID: LCSD 680-519231/5
Matrix: Water
Analysis Batch: 519231

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			250	225		ug/L		90	39 - 160	9	20
Benzene			50.0	48.7		ug/L		97	79 - 120	2	20
Bromobenzene			50.0	50.3		ug/L		101	80 - 120	4	20
Bromoform			50.0	53.5		ug/L		107	66 - 130	4	20
Bromomethane			50.0	61.5		ug/L		123	53 - 141	3	20
2-Butanone (MEK)			250	242		ug/L		97	56 - 143	3	20
Carbon disulfide			50.0	50.5		ug/L		101	64 - 133	0	20
Carbon tetrachloride			50.0	49.2		ug/L		98	72 - 136	1	20
Chlorobenzene			50.0	49.5		ug/L		99	82 - 118	1	20
Chlorobromomethane			50.0	46.5		ug/L		93	78 - 123	5	20
Chlorodibromomethane			50.0	51.4		ug/L		103	74 - 126	4	20
Chloroethane			50.0	51.7		ug/L		103	60 - 138	2	20
Chloroform			50.0	47.9		ug/L		96	79 - 124	3	20
Chloromethane			50.0	53.4	M	ug/L		107	50 - 139	1	20
2-Chlorotoluene			50.0	50.7		ug/L		101	79 - 122	1	20
4-Chlorotoluene			50.0	51.6		ug/L		103	78 - 122	0	20
cis-1,2-Dichloroethene			50.0	49.3		ug/L		99	78 - 123	3	20
cis-1,3-Dichloropropene			50.0	51.9		ug/L		104	75 - 124	3	20
1,2-Dibromo-3-Chloropropane			50.0	49.6		ug/L		99	62 - 128	6	20
Dibromomethane			50.0	46.8		ug/L		94	79 - 123	4	20
1,2-Dichlorobenzene			50.0	48.2		ug/L		96	80 - 119	3	20
1,3-Dichlorobenzene			50.0	49.3		ug/L		99	80 - 119	2	20
1,4-Dichlorobenzene			50.0	48.3		ug/L		97	79 - 118	2	20
Dichlorobromomethane			50.0	49.7		ug/L		99	79 - 125	3	20
Dichlorodifluoromethane			50.0	56.0		ug/L		112	32 - 152	3	20
1,1-Dichloroethane			50.0	49.7		ug/L		99	77 - 125	2	20
1,2-Dichloroethane			50.0	46.8		ug/L		94	73 - 128	5	20
1,1-Dichloroethene			50.0	51.2		ug/L		102	71 - 131	4	20
1,2-Dichloroethene, Total			100	99.4		ug/L		99	79 - 121	2	20
1,2-Dichloropropane			50.0	49.7		ug/L		99	78 - 122	2	20
1,3-Dichloropropane			50.0	48.6		ug/L		97	80 - 119	4	20
2,2-Dichloropropane			50.0	53.7		ug/L		107	60 - 139	0	20

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

Lab Sample ID: LCSD 680-519231/5
Matrix: Water
Analysis Batch: 519231

Client Sample 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-Dichloropropene			50.0	49.7		ug/L		99	79 - 125	1	20
Ethylbenzene			50.0	50.4		ug/L		101	79 - 121	1	20
Ethylene Dibromide			50.0	48.0		ug/L		96	75 - 127	6	20
Hexachlorobutadiene			50.0	53.9		ug/L		108	66 - 134	2	20
2-Hexanone			250	241		ug/L		97	57 - 139	6	20
Isopropylbenzene			50.0	51.7		ug/L		103	72 - 131	0	20
4-Isopropyltoluene			50.0	51.3		ug/L		103	77 - 127	1	20
Methylene Chloride			50.0	48.4		ug/L		97	74 - 124	3	20
4-Methyl-2-pentanone (MIBK)			250	241		ug/L		96	67 - 130	5	20
Methyl tert-butyl ether			50.0	48.1		ug/L		96	71 - 124	5	20
m-Xylene & p-Xylene			50.0	51.3		ug/L		103	80 - 121	0	20
Naphthalene			50.0	57.4		ug/L		115	61 - 128	3	20
n-Butylbenzene			50.0	51.9		ug/L		104	75 - 128	0	20
N-Propylbenzene			50.0	51.8		ug/L		104	76 - 126	1	20
o-Xylene			50.0	51.3		ug/L		103	78 - 122	1	20
sec-Butylbenzene			50.0	51.9		ug/L		104	77 - 126	1	20
Styrene			50.0	52.2		ug/L		104	78 - 123	2	20
tert-Butylbenzene			50.0	51.3		ug/L		103	78 - 124	1	20
1,1,1,2-Tetrachloroethane			50.0	52.2		ug/L		104	78 - 124	1	20
1,1,2,2-Tetrachloroethane			50.0	48.1		ug/L		96	71 - 121	4	20
Tetrachloroethene			50.0	49.8		ug/L		100	74 - 129	1	20
Toluene			50.0	50.0		ug/L		100	80 - 121	2	20
trans-1,2-Dichloroethene			50.0	50.1		ug/L		100	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	51.5		ug/L		103	73 - 127	5	20
1,2,3-Trichlorobenzene			50.0	57.3		ug/L		115	69 - 129	0	20
1,2,4-Trichlorobenzene			50.0	51.3		ug/L		103	69 - 130	1	20
1,1,1-Trichloroethane			50.0	48.9		ug/L		98	74 - 131	2	20
1,1,2-Trichloroethane			50.0	48.4		ug/L		97	80 - 119	4	20
Trichloroethene			50.0	48.7		ug/L		97	79 - 123	1	20
Trichlorofluoromethane			50.0	50.6		ug/L		101	65 - 141	2	20
1,2,3-Trichloropropane			50.0	47.9		ug/L		96	73 - 122	5	20
1,2,4-Trimethylbenzene			50.0	52.0		ug/L		104	76 - 124	1	20
1,3,5-Trimethylbenzene			50.0	52.1		ug/L		104	75 - 124	1	20
Vinyl acetate			100	111		ug/L		111	54 - 146	5	20
Vinyl chloride			50.0	50.1		ug/L		100	58 - 137	1	20
Xylenes, Total			100	103		ug/L		103	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
Toluene-d8 (Surr)	*100*		*89 - 112*

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

Lab Sample ID: MB 680-519236/8
Matrix: Water
Analysis Batch: 519236

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/09/18 11:46	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:46	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:46	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:46	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/09/18 11:46	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/09/18 11:46	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:46	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/09/18 11:46	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:46	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/09/18 11:46	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:46	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 11:46	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 11:46	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/09/18 11:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/09/18 11:46	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/09/18 11:46	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:46	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:46	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/09/18 11:46	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/09/18 11:46	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 11:46	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/09/18 11:46	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 11:46	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/09/18 11:46	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/09/18 11:46	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/09/18 11:46	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/09/18 11:46	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 11:46	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:46	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/09/18 11:46	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:46	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/09/18 11:46	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/09/18 11:46	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:46	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:46	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/09/18 11:46	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/09/18 11:46	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/09/18 11:46	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 11:46	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/09/18 11:46	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/09/18 11:46	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:46	1

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

Lab Sample ID: MB 680-519236/8
Matrix: Water
Analysis Batch: 519236

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/09/18 11:46	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/09/18 11:46	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/09/18 11:46	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/09/18 11:46	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:46	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/09/18 11:46	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/09/18 11:46	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/09/18 11:46	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/09/18 11:46	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/09/18 11:46	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/09/18 11:46	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/09/18 11:46	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/09/18 11:46	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/09/18 11:46	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/09/18 11:46	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/09/18 11:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*04/09/18 11:46*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*04/09/18 11:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*04/09/18 11:46*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*04/09/18 11:46*	*1*

Lab Sample ID: LCS 680-519236/4
Matrix: Water
Analysis Batch: 519236

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	235		ug/L		94	39 - 160
Benzene	50.0	49.2		ug/L		98	79 - 120
Bromobenzene	50.0	52.2		ug/L		104	80 - 120
Bromoform	50.0	52.0		ug/L		104	66 - 130
Bromomethane	50.0	47.8		ug/L		96	53 - 141
2-Butanone (MEK)	250	263		ug/L		105	56 - 143
Carbon disulfide	50.0	49.4		ug/L		99	64 - 133
Carbon tetrachloride	50.0	50.3		ug/L		101	72 - 136
Chlorobenzene	50.0	50.8		ug/L		102	82 - 118
Chlorobromomethane	50.0	51.0		ug/L		102	78 - 123
Chlorodibromomethane	50.0	51.8		ug/L		104	74 - 126
Chloroethane	50.0	52.2		ug/L		104	60 - 138
Chloroform	50.0	47.9		ug/L		96	79 - 124
Chloromethane	50.0	51.6		ug/L		103	50 - 139
2-Chlorotoluene	50.0	49.8		ug/L		100	79 - 122
4-Chlorotoluene	50.0	49.8		ug/L		100	78 - 122

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

Lab Sample ID: LCS 680-519236/4
Matrix: Water
Analysis Batch: 519236

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	49.6		ug/L		99	78 - 123
cis-1,3-Dichloropropene	50.0	51.7		ug/L		103	75 - 124
1,2-Dibromo-3-Chloropropane	50.0	52.9		ug/L		106	62 - 128
Dibromomethane	50.0	49.7		ug/L		99	79 - 123
1,2-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 119
1,3-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	48.6		ug/L		97	79 - 118
Dichlorobromomethane	50.0	49.3		ug/L		99	79 - 125
Dichlorodifluoromethane	50.0	53.2		ug/L		106	32 - 152
1,1-Dichloroethane	50.0	49.4		ug/L		99	77 - 125
1,2-Dichloroethane	50.0	46.3		ug/L		93	73 - 128
1,1-Dichloroethene	50.0	50.3		ug/L		101	71 - 131
1,2-Dichloroethene, Total	100	99.8		ug/L		100	79 - 121
1,2-Dichloropropane	50.0	49.5		ug/L		99	78 - 122
1,3-Dichloropropane	50.0	49.5		ug/L		99	80 - 119
2,2-Dichloropropane	50.0	52.0		ug/L		104	60 - 139
1,1-Dichloropropene	50.0	48.2		ug/L		96	79 - 125
Ethylbenzene	50.0	49.9		ug/L		100	79 - 121
Ethylene Dibromide	50.0	49.9		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	52.5		ug/L		105	66 - 134
2-Hexanone	250	242		ug/L		97	57 - 139
Isopropylbenzene	50.0	50.7		ug/L		101	72 - 131
4-Isopropyltoluene	50.0	50.1		ug/L		100	77 - 127
Methylene Chloride	50.0	51.9		ug/L		104	74 - 124
4-Methyl-2-pentanone (MIBK)	250	239		ug/L		96	67 - 130
Methyl tert-butyl ether	50.0	49.3		ug/L		99	71 - 124
m-Xylene & p-Xylene	50.0	50.8		ug/L		102	80 - 121
Naphthalene	50.0	51.4		ug/L		103	61 - 128
n-Butylbenzene	50.0	50.7		ug/L		101	75 - 128
N-Propylbenzene	50.0	50.9		ug/L		102	76 - 126
o-Xylene	50.0	49.6		ug/L		99	78 - 122
sec-Butylbenzene	50.0	51.5		ug/L		103	77 - 126
Styrene	50.0	51.9		ug/L		104	78 - 123
tert-Butylbenzene	50.0	51.3		ug/L		103	78 - 124
1,1,1,2-Tetrachloroethane	50.0	52.1		ug/L		104	78 - 124
1,1,2,2-Tetrachloroethane	50.0	50.7		ug/L		101	71 - 121
Tetrachloroethene	50.0	51.9		ug/L		104	74 - 129
Toluene	50.0	50.2		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	50.2		ug/L		100	75 - 124
trans-1,3-Dichloropropene	50.0	51.2		ug/L		102	73 - 127
1,2,3-Trichlorobenzene	50.0	51.7		ug/L		103	69 - 129
1,2,4-Trichlorobenzene	50.0	51.0		ug/L		102	69 - 130
1,1,1-Trichloroethane	50.0	48.3		ug/L		97	74 - 131
1,1,2-Trichloroethane	50.0	49.9		ug/L		100	80 - 119
Trichloroethene	50.0	50.4		ug/L		101	79 - 123
Trichlorofluoromethane	50.0	46.9		ug/L		94	65 - 141
1,2,3-Trichloropropane	50.0	50.0		ug/L		100	73 - 122
1,2,4-Trimethylbenzene	50.0	51.2		ug/L		102	76 - 124

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

Lab Sample ID: LCS 680-519236/4
Matrix: Water
Analysis Batch: 519236

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	50.9		ug/L		102	75 - 124		
Vinyl acetate			100	110		ug/L		110	54 - 146		
Vinyl chloride			50.0	50.8		ug/L		102	58 - 137		
Xylenes, Total			100	100		ug/L		100	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: LCSD 680-519236/5
Matrix: Water
Analysis Batch: 519236

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			250	234		ug/L		94	39 - 160	0	20
Benzene			50.0	49.9		ug/L		100	79 - 120	1	20
Bromobenzene			50.0	52.4		ug/L		105	80 - 120	0	20
Bromoform			50.0	51.3		ug/L		103	66 - 130	1	20
Bromomethane			50.0	46.2		ug/L		92	53 - 141	3	20
2-Butanone (MEK)			250	260		ug/L		104	56 - 143	1	20
Carbon disulfide			50.0	50.2		ug/L		100	64 - 133	2	20
Carbon tetrachloride			50.0	49.5		ug/L		99	72 - 136	1	20
Chlorobenzene			50.0	50.4		ug/L		101	82 - 118	1	20
Chlorobromomethane			50.0	50.4		ug/L		101	78 - 123	1	20
Chlorodibromomethane			50.0	51.9		ug/L		104	74 - 126	0	20
Chloroethane			50.0	53.9		ug/L		108	60 - 138	3	20
Chloroform			50.0	45.7		ug/L		91	79 - 124	5	20
Chloromethane			50.0	53.8		ug/L		108	50 - 139	4	20
2-Chlorotoluene			50.0	50.4		ug/L		101	79 - 122	1	20
4-Chlorotoluene			50.0	51.0		ug/L		102	78 - 122	2	20
cis-1,2-Dichloroethene			50.0	47.5		ug/L		95	78 - 123	4	20
cis-1,3-Dichloropropene			50.0	51.5		ug/L		103	75 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	51.6		ug/L		103	62 - 128	3	20
Dibromomethane			50.0	48.0		ug/L		96	79 - 123	3	20
1,2-Dichlorobenzene			50.0	48.7		ug/L		97	80 - 119	1	20
1,3-Dichlorobenzene			50.0	49.3		ug/L		99	80 - 119	0	20
1,4-Dichlorobenzene			50.0	48.7		ug/L		97	79 - 118	0	20
Dichlorobromomethane			50.0	48.8		ug/L		98	79 - 125	1	20
Dichlorodifluoromethane			50.0	56.0		ug/L		112	32 - 152	5	20
1,1-Dichloroethane			50.0	47.0		ug/L		94	77 - 125	5	20
1,2-Dichloroethane			50.0	44.8		ug/L		90	73 - 128	3	20
1,1-Dichloroethene			50.0	48.8		ug/L		98	71 - 131	3	20
1,2-Dichloroethene, Total			100	95.2		ug/L		95	79 - 121	5	20
1,2-Dichloropropane			50.0	49.2		ug/L		98	78 - 122	1	20
1,3-Dichloropropane			50.0	50.1		ug/L		100	80 - 119	1	20
2,2-Dichloropropane			50.0	50.7		ug/L		101	60 - 139	3	20

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

Lab Sample ID: LCSD 680-519236/5
Matrix: Water
Analysis Batch: 519236

Client Sample 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-Dichloropropene			50.0	48.8		ug/L		98	79 - 125	1	20
Ethylbenzene			50.0	50.2		ug/L		100	79 - 121	1	20
Ethylene Dibromide			50.0	50.4		ug/L		101	75 - 127	1	20
Hexachlorobutadiene			50.0	52.4		ug/L		105	66 - 134	0	20
2-Hexanone			250	248		ug/L		99	57 - 139	2	20
Isopropylbenzene			50.0	51.0		ug/L		102	72 - 131	1	20
4-Isopropyltoluene			50.0	50.6		ug/L		101	77 - 127	1	20
Methylene Chloride			50.0	52.8		ug/L		106	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	241		ug/L		97	67 - 130	1	20
Methyl tert-butyl ether			50.0	47.3		ug/L		95	71 - 124	4	20
m-Xylene & p-Xylene			50.0	50.7		ug/L		101	80 - 121	0	20
Naphthalene			50.0	49.4		ug/L		99	61 - 128	4	20
n-Butylbenzene			50.0	50.7		ug/L		101	75 - 128	0	20
N-Propylbenzene			50.0	52.0		ug/L		104	76 - 126	2	20
o-Xylene			50.0	50.3		ug/L		101	78 - 122	1	20
sec-Butylbenzene			50.0	52.4		ug/L		105	77 - 126	2	20
Styrene			50.0	52.5		ug/L		105	78 - 123	1	20
tert-Butylbenzene			50.0	52.3		ug/L		105	78 - 124	2	20
1,1,1,2-Tetrachloroethane			50.0	51.1		ug/L		102	78 - 124	2	20
1,1,2,2-Tetrachloroethane			50.0	51.1		ug/L		102	71 - 121	1	20
Tetrachloroethene			50.0	52.9		ug/L		106	74 - 129	2	20
Toluene			50.0	51.4		ug/L		103	80 - 121	2	20
trans-1,2-Dichloroethene			50.0	47.7		ug/L		95	75 - 124	5	20
trans-1,3-Dichloropropene			50.0	51.7		ug/L		103	73 - 127	1	20
1,2,3-Trichlorobenzene			50.0	51.2		ug/L		102	69 - 129	1	20
1,2,4-Trichlorobenzene			50.0	50.2		ug/L		100	69 - 130	2	20
1,1,1-Trichloroethane			50.0	47.1		ug/L		94	74 - 131	3	20
1,1,2-Trichloroethane			50.0	50.4		ug/L		101	80 - 119	1	20
Trichloroethene			50.0	50.6		ug/L		101	79 - 123	1	20
Trichlorofluoromethane			50.0	44.6		ug/L		89	65 - 141	5	20
1,2,3-Trichloropropane			50.0	50.9		ug/L		102	73 - 122	2	20
1,2,4-Trimethylbenzene			50.0	51.2		ug/L		102	76 - 124	0	20
1,3,5-Trimethylbenzene			50.0	51.5		ug/L		103	75 - 124	1	20
Vinyl acetate			100	105		ug/L		105	54 - 146	5	20
Vinyl chloride			50.0	53.5		ug/L		107	58 - 137	5	20
Xylenes, Total			100	101		ug/L		101	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
Toluene-d8 (Surr)	*96*		*89 - 112*

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

Lab Sample ID: MB 680-519392/9
Matrix: Water
Analysis Batch: 519392

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/10/18 12:20	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/10/18 12:20	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/10/18 12:20	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/10/18 12:20	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/10/18 12:20	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/10/18 12:20	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/10/18 12:20	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/10/18 12:20	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/10/18 12:20	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/10/18 12:20	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/10/18 12:20	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/10/18 12:20	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/10/18 12:20	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/10/18 12:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/10/18 12:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/10/18 12:20	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/10/18 12:20	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/10/18 12:20	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/10/18 12:20	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/10/18 12:20	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/10/18 12:20	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/10/18 12:20	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/10/18 12:20	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/10/18 12:20	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/10/18 12:20	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/10/18 12:20	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/10/18 12:20	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/10/18 12:20	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/10/18 12:20	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/10/18 12:20	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/10/18 12:20	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/10/18 12:20	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/10/18 12:20	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/10/18 12:20	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/10/18 12:20	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/10/18 12:20	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/10/18 12:20	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/10/18 12:20	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/10/18 12:20	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/10/18 12:20	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/10/18 12:20	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/10/18 12:20	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/10/18 12:20	1

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

Lab Sample ID: MB 680-519392/9
Matrix: Water
Analysis Batch: 519392

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/10/18 12:20	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/10/18 12:20	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/10/18 12:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/10/18 12:20	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/10/18 12:20	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/10/18 12:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/10/18 12:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/10/18 12:20	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/10/18 12:20	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/10/18 12:20	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/10/18 12:20	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/10/18 12:20	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/10/18 12:20	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/10/18 12:20	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/10/18 12:20	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/10/18 12:20	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/10/18 12:20	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/10/18 12:20	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/10/18 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/10/18 12:20*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*04/10/18 12:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/10/18 12:20*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*04/10/18 12:20*	*1*

Lab Sample ID: LCS 680-519392/4
Matrix: Water
Analysis Batch: 519392

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	242		ug/L		97	39 - 160
Benzene	50.0	49.0		ug/L		98	79 - 120
Bromobenzene	50.0	51.2		ug/L		102	80 - 120
Bromoform	50.0	54.2		ug/L		108	66 - 130
Bromomethane	50.0	54.2		ug/L		108	53 - 141
2-Butanone (MEK)	250	252		ug/L		101	56 - 143
Carbon disulfide	50.0	48.5		ug/L		97	64 - 133
Carbon tetrachloride	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	50.0	49.9		ug/L		100	82 - 118
Chlorobromomethane	50.0	47.9		ug/L		96	78 - 123
Chlorodibromomethane	50.0	52.8		ug/L		106	74 - 126
Chloroethane	50.0	49.1		ug/L		98	60 - 138
Chloroform	50.0	48.7		ug/L		97	79 - 124
Chloromethane	50.0	47.4	M	ug/L		95	50 - 139
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122
4-Chlorotoluene	50.0	51.3		ug/L		103	78 - 122

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

Lab Sample ID: LCS 680-519392/4
Matrix: Water
Analysis Batch: 519392

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	50.0		ug/L		100	78 - 123
cis-1,3-Dichloropropene	50.0	53.4		ug/L		107	75 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.2		ug/L		100	62 - 128
Dibromomethane	50.0	48.3		ug/L		97	79 - 123
1,2-Dichlorobenzene	50.0	48.6		ug/L		97	80 - 119
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118
Dichlorobromomethane	50.0	50.9		ug/L		102	79 - 125
Dichlorodifluoromethane	50.0	45.2		ug/L		90	32 - 152
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,2-Dichloroethane	50.0	47.8		ug/L		96	73 - 128
1,1-Dichloroethene	50.0	49.8		ug/L		100	71 - 131
1,2-Dichloroethene, Total	100	99.6		ug/L		100	79 - 121
1,2-Dichloropropane	50.0	50.8		ug/L		102	78 - 122
1,3-Dichloropropane	50.0	50.0		ug/L		100	80 - 119
2,2-Dichloropropane	50.0	53.3		ug/L		107	60 - 139
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
Ethylbenzene	50.0	50.8		ug/L		102	79 - 121
Ethylene Dibromide	50.0	50.4		ug/L		101	75 - 127
Hexachlorobutadiene	50.0	53.3		ug/L		107	66 - 134
2-Hexanone	250	263		ug/L		105	57 - 139
Isopropylbenzene	50.0	52.3		ug/L		105	72 - 131
4-Isopropyltoluene	50.0	51.5		ug/L		103	77 - 127
Methylene Chloride	50.0	49.0		ug/L		98	74 - 124
4-Methyl-2-pentanone (MIBK)	250	259		ug/L		104	67 - 130
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124
m-Xylene & p-Xylene	50.0	51.4		ug/L		103	80 - 121
Naphthalene	50.0	57.2		ug/L		114	61 - 128
n-Butylbenzene	50.0	52.6		ug/L		105	75 - 128
N-Propylbenzene	50.0	52.3		ug/L		105	76 - 126
o-Xylene	50.0	51.7		ug/L		103	78 - 122
sec-Butylbenzene	50.0	52.6		ug/L		105	77 - 126
Styrene	50.0	53.0		ug/L		106	78 - 123
tert-Butylbenzene	50.0	52.0		ug/L		104	78 - 124
1,1,1,2-Tetrachloroethane	50.0	52.5		ug/L		105	78 - 124
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	71 - 121
Tetrachloroethene	50.0	50.0		ug/L		100	74 - 129
Toluene	50.0	50.5		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	49.6		ug/L		99	75 - 124
trans-1,3-Dichloropropene	50.0	53.9		ug/L		108	73 - 127
1,2,3-Trichlorobenzene	50.0	56.2		ug/L		112	69 - 129
1,2,4-Trichlorobenzene	50.0	50.2		ug/L		100	69 - 130
1,1,1-Trichloroethane	50.0	48.8		ug/L		98	74 - 131
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 119
Trichloroethene	50.0	49.0		ug/L		98	79 - 123
Trichlorofluoromethane	50.0	47.5		ug/L		95	65 - 141
1,2,3-Trichloropropane	50.0	48.9		ug/L		98	73 - 122
1,2,4-Trimethylbenzene	50.0	52.3		ug/L		105	76 - 124

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

Lab Sample ID: LCS 680-519392/4
Matrix: Water
Analysis Batch: 519392

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trimethylbenzene			50.0	52.6		ug/L		105	75 - 124		
Vinyl acetate			100	117		ug/L		117	54 - 146		
Vinyl chloride			50.0	45.7		ug/L		91	58 - 137		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*
Toluene-d8 (Surr)	*100*		*89 - 112*

Lab Sample ID: LCSD 680-519392/5
Matrix: Water
Analysis Batch: 519392

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			250	245		ug/L		98	39 - 160	1	20
Benzene			50.0	49.6		ug/L		99	79 - 120	1	20
Bromobenzene			50.0	53.0		ug/L		106	80 - 120	3	20
Bromoform			50.0	55.5		ug/L		111	66 - 130	2	20
Bromomethane			50.0	55.0		ug/L		110	53 - 141	2	20
2-Butanone (MEK)			250	254		ug/L		101	56 - 143	1	20
Carbon disulfide			50.0	48.2		ug/L		96	64 - 133	1	20
Carbon tetrachloride			50.0	48.3		ug/L		97	72 - 136	2	20
Chlorobenzene			50.0	50.4		ug/L		101	82 - 118	1	20
Chlorobromomethane			50.0	49.2		ug/L		98	78 - 123	3	20
Chlorodibromomethane			50.0	53.5		ug/L		107	74 - 126	1	20
Chloroethane			50.0	49.1		ug/L		98	60 - 138	0	20
Chloroform			50.0	49.5		ug/L		99	79 - 124	2	20
Chloromethane			50.0	46.9	M	ug/L		94	50 - 139	1	20
2-Chlorotoluene			50.0	51.3		ug/L		103	79 - 122	0	20
4-Chlorotoluene			50.0	52.5		ug/L		105	78 - 122	2	20
cis-1,2-Dichloroethene			50.0	50.7		ug/L		101	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	54.3		ug/L		109	75 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	49.4		ug/L		99	62 - 128	2	20
Dibromomethane			50.0	49.2		ug/L		98	79 - 123	2	20
1,2-Dichlorobenzene			50.0	49.5		ug/L		99	80 - 119	2	20
1,3-Dichlorobenzene			50.0	51.0		ug/L		102	80 - 119	3	20
1,4-Dichlorobenzene			50.0	49.7		ug/L		99	79 - 118	1	20
Dichlorobromomethane			50.0	51.7		ug/L		103	79 - 125	2	20
Dichlorodifluoromethane			50.0	43.3		ug/L		87	32 - 152	4	20
1,1-Dichloroethane			50.0	50.4		ug/L		101	77 - 125	1	20
1,2-Dichloroethane			50.0	48.7		ug/L		97	73 - 128	2	20
1,1-Dichloroethene			50.0	49.2		ug/L		98	71 - 131	1	20
1,2-Dichloroethene, Total			100	100		ug/L		100	79 - 121	0	20
1,2-Dichloropropane			50.0	52.0		ug/L		104	78 - 122	2	20
1,3-Dichloropropane			50.0	51.2		ug/L		102	80 - 119	2	20
2,2-Dichloropropane			50.0	53.4		ug/L		107	60 - 139	0	20

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

Lab Sample ID: LCSD 680-519392/5
Matrix: Water
Analysis Batch: 519392

Client Sample 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-Dichloropropene			50.0	49.0		ug/L		98	79 - 125	2	20
Ethylbenzene			50.0	51.0		ug/L		102	79 - 121	0	20
Ethylene Dibromide			50.0	51.7		ug/L		103	75 - 127	2	20
Hexachlorobutadiene			50.0	51.9		ug/L		104	66 - 134	3	20
2-Hexanone			250	266		ug/L		106	57 - 139	1	20
Isopropylbenzene			50.0	51.8		ug/L		104	72 - 131	1	20
4-Isopropyltoluene			50.0	51.4		ug/L		103	77 - 127	0	20
Methylene Chloride			50.0	49.9		ug/L		100	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	263		ug/L		105	67 - 130	2	20
Methyl tert-butyl ether			50.0	51.1		ug/L		102	71 - 124	3	20
m-Xylene & p-Xylene			50.0	51.6		ug/L		103	80 - 121	1	20
Naphthalene			50.0	57.9		ug/L		116	61 - 128	1	20
n-Butylbenzene			50.0	52.1		ug/L		104	75 - 128	1	20
N-Propylbenzene			50.0	52.2		ug/L		104	76 - 126	0	20
o-Xylene			50.0	51.9		ug/L		104	78 - 122	0	20
sec-Butylbenzene			50.0	51.6		ug/L		103	77 - 126	2	20
Styrene			50.0	53.6		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	51.5		ug/L		103	78 - 124	1	20
1,1,1,2-Tetrachloroethane			50.0	53.3		ug/L		107	78 - 124	1	20
1,1,2,2-Tetrachloroethane			50.0	50.4		ug/L		101	71 - 121	3	20
Tetrachloroethene			50.0	49.1		ug/L		98	74 - 129	2	20
Toluene			50.0	51.0		ug/L		102	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	49.4		ug/L		99	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	54.8		ug/L		110	73 - 127	2	20
1,2,3-Trichlorobenzene			50.0	56.1		ug/L		112	69 - 129	0	20
1,2,4-Trichlorobenzene			50.0	50.8		ug/L		102	69 - 130	1	20
1,1,1-Trichloroethane			50.0	48.5		ug/L		97	74 - 131	1	20
1,1,2-Trichloroethane			50.0	51.3		ug/L		103	80 - 119	2	20
Trichloroethene			50.0	49.3		ug/L		99	79 - 123	0	20
Trichlorofluoromethane			50.0	47.9		ug/L		96	65 - 141	1	20
1,2,3-Trichloropropane			50.0	49.5		ug/L		99	73 - 122	1	20
1,2,4-Trimethylbenzene			50.0	52.7		ug/L		105	76 - 124	1	20
1,3,5-Trimethylbenzene			50.0	52.9		ug/L		106	75 - 124	1	20
Vinyl acetate			100	119		ug/L		119	54 - 146	2	20
Vinyl chloride			50.0	44.5		ug/L		89	58 - 137	3	20
Xylenes, Total			100	104		ug/L		104	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
Toluene-d8 (Surr)	*101*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-519063/8
Matrix: Water
Analysis Batch: 519063

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/06/18 11:41	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/06/18 11:41	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		04/06/18 11:41	1
Methane (TCD)	77	U	390	77	39	ug/L		04/06/18 11:41	1

Lab Sample ID: LCS 680-519063/3
Matrix: Water
Analysis Batch: 519063

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	315		ug/L		109	75 - 125
Ethylene	269	290		ug/L		108	75 - 125
Methane	154	171		ug/L		111	75 - 125

Lab Sample ID: LCS 680-519063/6
Matrix: Water
Analysis Batch: 519063

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	75 - 125

Lab Sample ID: LCSD 680-519063/4
Matrix: Water
Analysis Batch: 519063

Client Sample 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	271		ug/L		94	75 - 125	15	30
Ethylene	269	249		ug/L		93	75 - 125	15	30
Methane	154	149		ug/L		97	75 - 125	14	30

Lab Sample ID: LCSD 680-519063/7
Matrix: Water
Analysis Batch: 519063

Client Sample 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	2060		ug/L		107	75 - 125	3	30

Lab Sample ID: MB 680-519540/8
Matrix: Water
Analysis Batch: 519540

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/11/18 10:50	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 10:50	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		04/11/18 10:50	1
Methane (TCD)	77	U	390	77	39	ug/L		04/11/18 10:50	1

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

Lab Sample ID: LCS 680-519540/3
Matrix: Water
Analysis Batch: 519540

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	316		ug/L		110	75 - 125
Ethylene	269	291		ug/L		108	75 - 125
Methane	154	172		ug/L		112	75 - 125

Lab Sample ID: LCS 680-519540/6
Matrix: Water
Analysis Batch: 519540

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	2110		ug/L		110	75 - 125

Lab Sample ID: LCSD 680-519540/4
Matrix: Water
Analysis Batch: 519540

Client Sample 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	261		ug/L		90	75 - 125	19	30
Ethylene	269	241		ug/L		89	75 - 125	19	30
Methane	154	144		ug/L		94	75 - 125	18	30

Lab Sample ID: LCSD 680-519540/7
Matrix: Water
Analysis Batch: 519540

Client Sample 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	2090		ug/L		109	75 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-519243/2
Matrix: Water
Analysis Batch: 519243

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		04/09/18 09:04	1

Lab Sample ID: LCS 680-519243/3
Matrix: Water
Analysis Batch: 519243

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	9.74	M	mg/L		97	87 - 112

Lab Sample ID: LCSD 680-519243/4
Matrix: Water
Analysis Batch: 519243

Client Sample 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	9.74		mg/L		97	87 - 112	0	15

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

Lab Sample ID: MB 680-520117/2
Matrix: Water
Analysis Batch: 520117

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		04/16/18 09:59	1

Lab Sample ID: LCS 680-520117/3
Matrix: Water
Analysis Batch: 520117

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 680-520117/4
Matrix: Water
Analysis Batch: 520117

Client Sample 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	2	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-519113/1-A
Matrix: Water
Analysis Batch: 519271

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519113

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/06/18 22:24	1
Manganese	3.0	U Q	10	3.0	1.0	ug/L		04/06/18 22:24	1

Lab Sample ID: LCS 680-519113/2-A
Matrix: Water
Analysis Batch: 519271

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519113

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5010		ug/L		100	87 - 115
Manganese	500	519	Q	ug/L		104	90 - 114

Lab Sample ID: MB 680-519268/1-A
Matrix: Water
Analysis Batch: 519618

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519268

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/10/18 20:48	1
Manganese	3.0	U	10	3.0	1.0	ug/L		04/10/18 20:48	1

Lab Sample ID: LCS 680-519268/2-A
Matrix: Water
Analysis Batch: 519618

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5020		ug/L		100	87 - 115
Manganese	500	512		ug/L		102	90 - 114

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

Lab Sample ID: MB 680-519480/1-A
Matrix: Water
Analysis Batch: 519787

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519480

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/11/18 14:24	1
Manganese	3.0	U	10	3.0	1.0	ug/L		04/11/18 14:24	1

Lab Sample ID: LCS 680-519480/2-A
Matrix: Water
Analysis Batch: 519787

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5120		ug/L		102	87 - 115
Manganese	500	522		ug/L		104	90 - 114

Lab Sample ID: 680-150689-8 MS
Matrix: Water
Analysis Batch: 519618

Client Sample ID: G6M-DUP01-SPR18
Prep Type: Dissolved
Prep Batch: 519268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	82000	J1	5000	83300	4	ug/L		30	87 - 115
Manganese	2700	J1	500	3120	4	ug/L		78	90 - 114

Lab Sample ID: 680-150689-8 MSD
Matrix: Water
Analysis Batch: 519618

Client Sample ID: G6M-DUP01-SPR18
Prep Type: Dissolved
Prep Batch: 519268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	82000	J1	5000	79400	4	ug/L		-48	87 - 115	5	20
Manganese	2700	J1	500	2960	4	ug/L		45	90 - 114	5	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-519119/1-A
Matrix: Water
Analysis Batch: 519177

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519119

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/06/18 17:46	1

Lab Sample ID: LCS 680-519119/2-A
Matrix: Water
Analysis Batch: 519177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519119

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	98.3		ug/L		98	84 - 116

Lab Sample ID: MB 680-519264/1-A
Matrix: Water
Analysis Batch: 519553

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519264

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/10/18 14:56	1

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

Lab Sample ID: LCS 680-519264/2-A
Matrix: Water
Analysis Batch: 519553

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519264

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	92.8		ug/L		93	84 - 116		

Lab Sample ID: MB 680-519481/1-A
Matrix: Water
Analysis Batch: 519758

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519481

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/11/18 10:53	1

Lab Sample ID: LCS 680-519481/2-A
Matrix: Water
Analysis Batch: 519758

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519481

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	100		ug/L		100	84 - 116		

Lab Sample ID: 680-150689-8 MS
Matrix: Water
Analysis Batch: 519553

Client Sample ID: G6M-DUP01-SPR18
Prep Type: Dissolved
Prep Batch: 519264

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	83		100	194		ug/L		111	84 - 116		

Lab Sample ID: 680-150689-8 MSD
Matrix: Water
Analysis Batch: 519553

Client Sample ID: G6M-DUP01-SPR18
Prep Type: Dissolved
Prep Batch: 519264

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	83		100	191		ug/L		108	84 - 116	2	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-411490/66
Matrix: Water
Analysis Batch: 411490

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		04/16/18 19:52	1

Lab Sample ID: LCS 280-411490/65
Matrix: Water
Analysis Batch: 411490

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	4.95		mg/L		99	90 - 110		

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-150689-4 MS
Matrix: Water
Analysis Batch: 411490

Client Sample ID: G6M-97-05B-SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.79		4.00	4.87		mg/L		102	90 - 110

Lab Sample ID: 680-150689-4 MSD
Matrix: Water
Analysis Batch: 411490

Client Sample ID: G6M-97-05B-SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.79		4.00	4.67		mg/L		97	90 - 110	4	10

Lab Sample ID: MB 280-411876/22
Matrix: Water
Analysis Batch: 411876

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		04/18/18 18:32	1

Lab Sample ID: LCS 280-411876/68
Matrix: Water
Analysis Batch: 411876

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	4.80		mg/L		96	90 - 110

Lab Sample ID: 680-150689-10 MS
Matrix: Water
Analysis Batch: 411876

Client Sample ID: G6M-13-01X-SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.050	U J1	4.00	4.42	J1	mg/L		111	90 - 110

Lab Sample ID: 680-150689-10 MSD
Matrix: Water
Analysis Batch: 411876

Client Sample ID: G6M-13-01X-SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.050	U J1	4.00	4.09		mg/L		102	90 - 110	8	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-519222/1
Matrix: Water
Analysis Batch: 519222

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 680-519222/2
Matrix: Water
Analysis Batch: 519222

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	9.12		mg/L		91	75 - 125

Lab Sample ID: LCSD 680-519222/3
Matrix: Water
Analysis Batch: 519222

Client Sample 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	9.17		mg/L		92	75 - 125	1	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-411274/35
Matrix: Water
Analysis Batch: 411274

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.179	J	1.0	0.50	0.16	mg/L		04/13/18 03:38	1

Lab Sample ID: LCS 280-411274/34
Matrix: Water
Analysis Batch: 411274

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	24.6		mg/L		98	88 - 112

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-410541/31
Matrix: Water
Analysis Batch: 410541

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.2	U	5.0	3.2	1.1	mg/L		04/06/18 19:21	1

Lab Sample ID: MB 280-410541/5
Matrix: Water
Analysis Batch: 410541

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.2	U	5.0	3.2	1.1	mg/L		04/06/18 15:59	1

Lab Sample ID: LCS 280-410541/30
Matrix: Water
Analysis Batch: 410541

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	188		mg/L		94	90 - 110

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-410541/4
Matrix: Water
Analysis Batch: 410541

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	189		mg/L		94	90 - 110

GC/MS VOA

Analysis Batch: 519231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	8260B	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	8260B	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	8260B	
680-150689-11	RB-01-SPR18	Total/NA	Water	8260B	
MB 680-519231/9	Method Blank	Total/NA	Water	8260B	
LCS 680-519231/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-519231/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 519236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-1	Trip Blank_040318	Total/NA	Water	8260B	
680-150689-2	XSA-12-96X-SPR18	Total/NA	Water	8260B	
680-150689-3	G6M-04-07X-SPR18	Total/NA	Water	8260B	
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	8260B	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	8260B	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	8260B	
MB 680-519236/8	Method Blank	Total/NA	Water	8260B	
LCS 680-519236/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-519236/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 519392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4 - DL	G6M-97-05B-SPR18	Total/NA	Water	8260B	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	8260B	
MB 680-519392/9	Method Blank	Total/NA	Water	8260B	
LCS 680-519392/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-519392/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 519063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	RSK-175	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	RSK-175	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	RSK-175	
MB 680-519063/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-519063/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-519063/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-519063/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-519063/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 519540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	RSK-175	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	RSK-175	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	RSK-175	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	RSK-175	
680-150689-11	RB-01-SPR18	Total/NA	Water	RSK-175	
MB 680-519540/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-519540/3	Lab Control Sample	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 519540 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-519540/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-519540/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-519540/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 519243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	9056A	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	9056A	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	9056A	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	9056A	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	9056A	
MB 680-519243/2	Method Blank	Total/NA	Water	9056A	
LCS 680-519243/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-519243/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 520117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	9056A	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	9056A	
680-150689-11	RB-01-SPR18	Total/NA	Water	9056A	
MB 680-520117/2	Method Blank	Total/NA	Water	9056A	
LCS 680-520117/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-520117/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 519113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-11	RB-01-SPR18	Total/NA	Water	3010A	
MB 680-519113/1-A	Method Blank	Total/NA	Water	3010A	
LCS 680-519113/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 519119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-11	RB-01-SPR18	Total/NA	Water	3010A	
MB 680-519119/1-A	Method Blank	Total/NA	Water	3010A	
LCS 680-519119/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 519177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-11	RB-01-SPR18	Total/NA	Water	6020A	519119
MB 680-519119/1-A	Method Blank	Total/NA	Water	6020A	519119
LCS 680-519119/2-A	Lab Control Sample	Total/NA	Water	6020A	519119

Prep Batch: 519264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8	G6M-DUP01-SPR18	Dissolved	Water	3005A	
680-150689-9	G6M-04-10A-SPR18	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 519264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-10	G6M-13-01X-SPR18	Dissolved	Water	3005A	
MB 680-519264/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519264/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-150689-8 MS	G6M-DUP01-SPR18	Dissolved	Water	3005A	
680-150689-8 MSD	G6M-DUP01-SPR18	Dissolved	Water	3005A	

Prep Batch: 519268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8	G6M-DUP01-SPR18	Dissolved	Water	3005A	
680-150689-9	G6M-04-10A-SPR18	Dissolved	Water	3005A	
680-150689-10	G6M-13-01X-SPR18	Dissolved	Water	3005A	
MB 680-519268/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519268/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-150689-8 MS	G6M-DUP01-SPR18	Dissolved	Water	3005A	
680-150689-8 MSD	G6M-DUP01-SPR18	Dissolved	Water	3005A	

Analysis Batch: 519271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-11	RB-01-SPR18	Total/NA	Water	6010C	519113
MB 680-519113/1-A	Method Blank	Total/NA	Water	6010C	519113
LCS 680-519113/2-A	Lab Control Sample	Total/NA	Water	6010C	519113

Prep Batch: 519480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-2	XSA-12-96X-SPR18	Dissolved	Water	3005A	
680-150689-3	G6M-04-07X-SPR18	Dissolved	Water	3005A	
680-150689-4	G6M-97-05B-SPR18	Dissolved	Water	3005A	
680-150689-5	G6M-13-02X-SPR18	Dissolved	Water	3005A	
680-150689-6	G6M-04-02X-SPR18	Dissolved	Water	3005A	
680-150689-7	G6M-07-02X-SPR18	Dissolved	Water	3005A	
MB 680-519480/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519480/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 519481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-2	XSA-12-96X-SPR18	Dissolved	Water	3005A	
680-150689-3	G6M-04-07X-SPR18	Dissolved	Water	3005A	
680-150689-4	G6M-97-05B-SPR18	Dissolved	Water	3005A	
680-150689-5	G6M-13-02X-SPR18	Dissolved	Water	3005A	
680-150689-6	G6M-04-02X-SPR18	Dissolved	Water	3005A	
680-150689-7	G6M-07-02X-SPR18	Dissolved	Water	3005A	
MB 680-519481/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519481/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 519553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8	G6M-DUP01-SPR18	Dissolved	Water	6020A	519264
680-150689-9	G6M-04-10A-SPR18	Dissolved	Water	6020A	519264
680-150689-10	G6M-13-01X-SPR18	Dissolved	Water	6020A	519264
MB 680-519264/1-A	Method Blank	Total Recoverable	Water	6020A	519264
LCS 680-519264/2-A	Lab Control Sample	Total Recoverable	Water	6020A	519264

Metals (Continued)

Analysis Batch: 519553 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8 MS	G6M-DUP01-SPR18	Dissolved	Water	6020A	519264
680-150689-8 MSD	G6M-DUP01-SPR18	Dissolved	Water	6020A	519264

Analysis Batch: 519618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-8	G6M-DUP01-SPR18	Dissolved	Water	6010C	519268
680-150689-9	G6M-04-10A-SPR18	Dissolved	Water	6010C	519268
680-150689-10	G6M-13-01X-SPR18	Dissolved	Water	6010C	519268
MB 680-519268/1-A	Method Blank	Total Recoverable	Water	6010C	519268
LCS 680-519268/2-A	Lab Control Sample	Total Recoverable	Water	6010C	519268
680-150689-8 MS	G6M-DUP01-SPR18	Dissolved	Water	6010C	519268
680-150689-8 MSD	G6M-DUP01-SPR18	Dissolved	Water	6010C	519268

Analysis Batch: 519758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-2	XSA-12-96X-SPR18	Dissolved	Water	6020A	519481
680-150689-3	G6M-04-07X-SPR18	Dissolved	Water	6020A	519481
680-150689-4	G6M-97-05B-SPR18	Dissolved	Water	6020A	519481
680-150689-5	G6M-13-02X-SPR18	Dissolved	Water	6020A	519481
680-150689-6	G6M-04-02X-SPR18	Dissolved	Water	6020A	519481
680-150689-7	G6M-07-02X-SPR18	Dissolved	Water	6020A	519481
MB 680-519481/1-A	Method Blank	Total Recoverable	Water	6020A	519481
LCS 680-519481/2-A	Lab Control Sample	Total Recoverable	Water	6020A	519481

Analysis Batch: 519787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-2	XSA-12-96X-SPR18	Dissolved	Water	6010C	519480
680-150689-3	G6M-04-07X-SPR18	Dissolved	Water	6010C	519480
680-150689-4	G6M-97-05B-SPR18	Dissolved	Water	6010C	519480
680-150689-5	G6M-13-02X-SPR18	Dissolved	Water	6010C	519480
680-150689-6	G6M-04-02X-SPR18	Dissolved	Water	6010C	519480
680-150689-7	G6M-07-02X-SPR18	Dissolved	Water	6010C	519480
MB 680-519480/1-A	Method Blank	Total Recoverable	Water	6010C	519480
LCS 680-519480/2-A	Lab Control Sample	Total Recoverable	Water	6010C	519480

General Chemistry

Analysis Batch: 410541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	SM 2320B	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	SM 2320B	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	SM 2320B	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	SM 2320B	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	SM 2320B	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	SM 2320B	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	SM 2320B	
680-150689-11	RB-01-SPR18	Total/NA	Water	SM 2320B	
MB 280-410541/31	Method Blank	Total/NA	Water	SM 2320B	
MB 280-410541/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-410541/30	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 410541 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-410541/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 411274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	9060A	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	9060A	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	9060A	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	9060A	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	9060A	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	9060A	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	9060A	
680-150689-11	RB-01-SPR18	Total/NA	Water	9060A	
MB 280-411274/35	Method Blank	Total/NA	Water	9060A	
LCS 280-411274/34	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 411490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	353.2	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	353.2	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	353.2	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	353.2	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	353.2	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	353.2	
MB 280-411490/66	Method Blank	Total/NA	Water	353.2	
LCS 280-411490/65	Lab Control Sample	Total/NA	Water	353.2	
680-150689-4 MS	G6M-97-05B-SPR18	Total/NA	Water	353.2	
680-150689-4 MSD	G6M-97-05B-SPR18	Total/NA	Water	353.2	

Analysis Batch: 411876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	353.2	
680-150689-11	RB-01-SPR18	Total/NA	Water	353.2	
MB 280-411876/22	Method Blank	Total/NA	Water	353.2	
LCS 280-411876/68	Lab Control Sample	Total/NA	Water	353.2	
680-150689-10 MS	G6M-13-01X-SPR18	Total/NA	Water	353.2	
680-150689-10 MSD	G6M-13-01X-SPR18	Total/NA	Water	353.2	

Analysis Batch: 519222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150689-4	G6M-97-05B-SPR18	Total/NA	Water	9034	
680-150689-5	G6M-13-02X-SPR18	Total/NA	Water	9034	
680-150689-6	G6M-04-02X-SPR18	Total/NA	Water	9034	
680-150689-7	G6M-07-02X-SPR18	Total/NA	Water	9034	
680-150689-8	G6M-DUP01-SPR18	Total/NA	Water	9034	
680-150689-9	G6M-04-10A-SPR18	Total/NA	Water	9034	
680-150689-10	G6M-13-01X-SPR18	Total/NA	Water	9034	
680-150689-11	RB-01-SPR18	Total/NA	Water	9034	
MB 680-519222/1	Method Blank	Total/NA	Water	9034	
LCS 680-519222/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-519222/3	Lab Control Sample Dup	Total/NA	Water	9034	

Client Sample ID: Trip Blank_040318

Lab Sample ID: 680-150689-1

Date Collected: 04/03/18 00:00

Matrix: Water

Date Received: 04/05/18 09:10

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	519236	04/09/18 12:36	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: XSA-12-96X-SPR18

Lab Sample ID: 680-150689-2

Date Collected: 04/03/18 10:15

Matrix: Water

Date Received: 04/05/18 09:10

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	519236	04/09/18 13:50	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 15:55	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:17	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-04-07X-SPR18

Lab Sample ID: 680-150689-3

Date Collected: 04/03/18 11:25

Matrix: Water

Date Received: 04/05/18 09:10

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	519236	04/09/18 14:15	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 16:00	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:20	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: G6M-97-05B-SPR18

Lab Sample ID: 680-150689-4

Date Collected: 04/03/18 13:00

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	2	5 mL	5 mL	519392	04/10/18 13:48	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	8260B		1	5 mL	5 mL	519236	04/09/18 14:39	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519063	04/06/18 17:07	KAB	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: G6M-97-05B-SPR18

Lab Sample ID: 680-150689-4

Date Collected: 04/03/18 13:00

Matrix: Water

Date Received: 04/05/18 09:10

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	519243	04/09/18 17:25	SMP	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 16:05	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:24	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 19:54	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 10:51	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 20:08	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-13-02X-SPR18

Lab Sample ID: 680-150689-5

Date Collected: 04/03/18 14:45

Matrix: Water

Date Received: 04/05/18 09:10

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	519236	04/09/18 15:04	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519063	04/06/18 17:20	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	519243	04/09/18 17:38	SMP	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 16:10	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:34	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 20:00	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 12:15	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 20:33	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-02X-SPR18

Lab Sample ID: 680-150689-6

Date Collected: 04/03/18 16:30

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	519236	04/09/18 15:29	Y1S	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519063	04/06/18 17:33	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	520117	04/16/18 14:13	CJM	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 16:16	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:38	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 20:02	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 13:13	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 20:40	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-07-02X-SPR18

Lab Sample ID: 680-150689-7

Date Collected: 04/04/18 09:05

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	519392	04/10/18 13:26	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519540	04/11/18 12:25	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	519243	04/09/18 16:46	SMP	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519480	04/10/18 15:30	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 16:31	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519481	04/10/18 15:34	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 11:41	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 20:04	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									

Client Sample ID: G6M-07-02X-SPR18

Lab Sample ID: 680-150689-7

Date Collected: 04/04/18 09:05

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		20.83			411274	04/13/18 10:31	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 20:59	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-DUP01-SPR18

Lab Sample ID: 680-150689-8

Date Collected: 04/04/18 09:10

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	519231	04/09/18 14:04	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519540	04/11/18 12:38	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	519243	04/09/18 16:59	SMP	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519268	04/09/18 09:31	AJR	TAL SAV
Dissolved	Analysis	6010C		1			519618	04/10/18 20:58	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519264	04/09/18 09:31	AJR	TAL SAV
Dissolved	Analysis	6020A		1			519553	04/10/18 15:03	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 20:06	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		13.16			411274	04/13/18 11:49	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 21:05	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-10A-SPR18

Lab Sample ID: 680-150689-9

Date Collected: 04/04/18 10:35

Matrix: Water

Date Received: 04/05/18 09:10

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	519231	04/09/18 14:27	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519540	04/11/18 12:51	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	519243	04/09/18 17:12	SMP	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519268	04/09/18 09:31	AJR	TAL SAV

Client Sample ID: G6M-04-10A-SPR18

Lab Sample ID: 680-150689-9

Date Collected: 04/04/18 10:35

Matrix: Water

Date Received: 04/05/18 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6010C		1			519618	04/10/18 21:24	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519264	04/09/18 09:31	AJR	TAL SAV
Dissolved	Analysis	6020A		1			519553	04/10/18 15:20	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 20:08	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 11:29	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 21:12	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-13-01X-SPR18

Lab Sample ID: 680-150689-10

Date Collected: 04/04/18 12:45

Matrix: Water

Date Received: 04/05/18 09:10

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	519231	04/09/18 14:49	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519540	04/11/18 13:04	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	520117	04/16/18 14:26	CJM	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519268	04/09/18 09:31	AJR	TAL SAV
Dissolved	Analysis	6010C		1			519618	04/10/18 21:29	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519264	04/09/18 09:31	AJR	TAL SAV
Dissolved	Analysis	6020A		1			519553	04/10/18 15:23	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	411876	04/18/18 18:34	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 10:12	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 21:17	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: RB-01-SPR18
Date Collected: 04/04/18 13:45
Date Received: 04/05/18 09:10

Lab Sample ID: 680-150689-11
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	519231	04/09/18 15:11	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519540	04/11/18 13:17	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	520117	04/16/18 14:39	CJM	TAL SAV
	Instrument ID: CICK									
Total/NA	Prep	3010A			50 mL	50 mL	519113	04/06/18 11:27	BCB	TAL SAV
Total/NA	Analysis	6010C		1			519271	04/06/18 23:44	BCB	TAL SAV
	Instrument ID: ICPF									
Total/NA	Prep	3010A			50 mL	250 mL	519119	04/06/18 11:29	BCB	TAL SAV
Total/NA	Analysis	6020A		1			519177	04/06/18 18:10	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	411876	04/18/18 18:40	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411274	04/13/18 11:09	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410541	04/06/18 21:24	LPL	TAL DEN
	Instrument ID: WC_AT2									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

360325-Boston

PO #	18-706	Devens - AOC50 Spring 2018 1082-052	**Chain of Custody Record**	Page: 2 of: 2

Company	KOMAN GS, LLC
Address:	293 Boston Post Road, Suite 100 Marlborough, MA 01752
Phone:	508-366-7442
Fax:	508-366-7445
Sampled by [Print Name(s)]/Affilliation	Kevin G. Anderson
Sampler(s) Signature(s)	[signature]

Laboratory:	Test America - Savannah
Address:	510 LaRoche Ave Savannah, GA 31404
Contact:	Jerry Lanier
Regulatory Facility No.	
Project Name:	Devens Spring 2018 LTM
Sampling QAP No.:	
Approval Date:	
TAT	Routine
Other:	

Preservatives (see codes): H, H, I, S, O, I, S, N

Analyses Requested

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	VOCs/SW8260 3-40-ml VOA vials (HCl)	RSK175 3-40-ml VOA vials (HCl)	Sulfate-SW9056 1-125-ml poly	Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4)	Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH)	Alkalinity/SM2320B 1-250-ml poly	TOC/SW9060 1-500-ml amber glass (H2SO4)	**Dissolved Metals*-** FF SW6010/6020 1-250 ml poly (HNO3)	Total Metals (no FF)	Remarks	Lab. No
66M-07-02X-SPR18	4/4/18	905	P	GW	12	X	X	X	X	X	X	X	X			
66M-DUP01-SPR18	4/4/18	910	P	GW	12	X	X	X	X	X	X	X	X			
66M-04-10A-SPR18	4/4/18	1035	P	GW	12	X	X	X	X	X	X	X	X			
66M-13-01X-SPR18	4/4/18	1245	P	GW	12	X	X	X	X	X	X	X	X			
RB-01-SPR18	4/4/18	1345	P	GW	12	X	X	X	X	X	X	X		X		
			P	GW												
TripBlank			O	O	2	X										
Shipping Details			courier pick up		2	← Total Number of Containers										

680-150689 Chain of Custody

Date Out:	Via:	Item No.	Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time
Returned:	Via:		[signature]	4/4/18	1410	[signature]	4-4-18	1410
Additional Comments:			[signature]	4-4-18	1800	[signature]	4/5/18	0910

* = Dissolved Metals include: Fe, Mn (6010); As (6020)

email logins and results to:

lekes@komangs.com

Lab Comments

Preserve Where Applicable ☐

On ICE ☐

Temperature _____ C

☐ NJ Reduced

☐ NJ Full

☐ Full CLP

☐ Disk Deliverable

☐ Other (Specify)

3.3(CF+0.1)3.4

MATRIX CODES: A = Air	GW = Groundwate	SE = Sediment	SP = Soil	SW = Surface Water	W = Water (Blanks)	O = Other
PRESERVATIVE CODES:	H = HCL + Ice	I = Ice Only	N = Nitric Acid + Ice	S = Sulfuric Acid + Ice	M = Methanol	O = Other
COLLECTION METHOD CODE	C = Composite	G=Grab	P= Pumping			O = Other

680-150689

360325 Boston 360325 Boston 360325 Boston

PO #	18-706	Devens - AOC50 Spring 2018 1082-052

Chain of Custody Record

Page: 1 of: 2

Company	KOMAN GS, LLC
Address:	293 Boston Post Road, Suite 100 Marlborough, MA 01752
Phone: 508-366-7442	Fax: 508-366-7445
Sampled by [Print Name(s)]/Affilliation	Kevin G. Anderson
Sampler(s) Signature(s)	

Laboratory:	Test America - Savannah
Address:	510 LaRoche Ave Savannah, GA 31404
Contact:	Jerry Lanier
Regulatory Facility No.	
Project Name:	Devens Spring 2018 LTM
Sampling QAP No.:	
Approval Date:	
TAT	Routine
Other:	

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	Preservatives (see codes) H	H	I	S	O	I	S	N			Analyses Requested: VOCs/SW8260 3-40-ml VOA vials (HCl)	RSK175 3-40-ml VOA vials (HCl)	Sulfate-SW9056 1-125-ml poly	Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4)	Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH)	Alkalinity/SM2320B 1-250-ml poly	TOC/SW9060 1-500-ml amber glass (H2SO4)	**Dissolved Metals*-** SW6010/6020 1-250 ml poly (HNO3)			Remarks	Lab. No.
TripBlank	4/3/18	-	P	GW	6											X	X										
XSA-12-96X-SPR18	4/3/18	1015	P	GW	4											X							X				
GM-04-07X-SPR18	4/3/18	1125	P	GW	4											X							X				
GM-97-05B-SPR18	4/3/18	1300	P	GW	12											X	X	X	X	X	X	X	X				
GM-B-02X-SPR18	4/3/18	1445	P	GW	12											X	X	X	X	X	X	X	X				
GM-04-02X-SPR18	4/3/18	1630	P	GW	12											X	X	X	X	X	X	X	X				
~~TripBlank~~			O	O	2											X	~~X~~										
Shipping Details			courier pick up		~~2~~											← Total Number of Containers											

Date Out:	Via:
Returned:	Via:
Additional Comments:	
* = Dissolved Metals include: Fe, Mn (6010); As (6020)	

Item No.	Relinquished by/Affiliation	Date	Time		Accepted by/Affiliation	Date	Time
		4/4/18	1410			4/4/18	1410
		4/4/18	1800				
						4/5/18	0710

email logins and results to:

lekes@komangs.com

Lab Comments

Preserve Where Applicable ☐

On ICE ☐

Temperature _____ C

☐ NJ Reduced

☐ NJ Full

☐ Full CLP

☐ Disk Deliverable

☐ Other (Specify)

3.3 CCFs-eo DB.C1

MATRIX CODES: A = Air	GW = Groundwat	SE = Sediment	SP = Soil	SW = Surface Water	W = Water (Blanks)	O = Other
PRESERVATIVE CODES:	H = HCL + Ice	I = Ice Only	N = Nitric Acid + Ice	S = Sulfuric Acid + Ice	M = Methanol	O = Other
COLLECTION METHOD CODE	C = Composite	G=Grab	P= Pumping			O = Other

360325-Boston

PO #	18-706	Devens - AOC50 Spring 2018 1082-052	**Chain of Custody Record**	Page: 1 of: 2

Company	KOMAN GS, LLC
Address:	293 Boston Post Road, Suite 100 Marlborough, MA 01752
Phone:	508-366-7442
Fax:	508-366-7445
Sampled by [Print Name(s)]/Affilliation	Kevin L. Anderson
Sampler(s) Signature(s)	[signature]

Laboratory:	Test America - Savannah
Address:	510 LaRoche Ave Savannah, GA 31404
Contact:	Jerry Lanier
Regulatory Facility No.	
Project Name:	Devens Spring 2018 LTM
Sampling QAP No.:	
Approval Date:	
TAT	Routine
Other:	

Preservatives (see codes) / Analyses Requested

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	VOCs/SW8260 3-40-ml VOA vials (HCl) (H)	RSK175 3-40-ml VOA vials (HCl) (H)	Sulfate-SW9056 1-125-ml poly (I)	Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4) (S)	Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH) (O)	Alkalinity/SM2320B 1-250-ml poly (I)	TOC/SW9060 1-500-ml amber glass (H2SO4) (S)	Dissolved Metals*-SW6010/6020 1-250 ml poly (HNO3) (N)	Remarks	Lab. No.
Trip Blank	4/3/18	-	P	GW	6	X	X								
XSA-12-96X-SPR18	4/3/18	1015	P	GW	4	X							X	Alkalinity, TOC	
66M-04-07X-SPR18	4/3/18	1125	P	GW	4	X							X	Nitrate - To	
66M-97-05B-SPR18	4/3/18	1300	P	GW	12	X	X	X	X	X	X	X	X	Denver	
66M-13-02X-SPR18	4/3/18	1445	P	GW	12	X	X	X	X	X	X	X	X		
66M-04-02X-SPR18	4/3/18	1630	P	GW	12	X	X	X	X	X	X	X	X		
~~TripBlank~~			~~O~~	~~O~~	~~2~~	~~X~~	1961								

Shipping Details: courier pick up — 2 ← Total Number of Containers

Date Out:	Via:	Item No.	Relinquished by/Affiliation	Date	Time		Accepted by/Affiliation	Date	Time
Returned:	Via:		[signature]	4/4/18	1410		[signature]	4-5-18	1110
Additional Comments:			[signature]	4-4-18	1800		Rudi Poa JH-Den	4-5-18	0850

* = Dissolved Metals include: Fe, Mn (6010); As (6020)

email logins and results to:

lekes@komangs.com

Lab Comments

0.5

IRH8 -0.1

Preserve Where Applicable ☐

On ICE ☐

Temperature _____ C

☐ NJ Reduced

☐ NJ Full

☐ Full CLP

☐ Disk Deliverable

☐ Other (Specify)

680-150689 Chain of Custody

MATRIX CODES: A = Air	GW = Groundwate	SE = Sediment	SP = Soil	SW = Surface Water	W = Water (Blanks)	O = Other
PRESERVATIVE CODES:	H = HCL + Ice	I = Ice Only	N = Nitric Acid + Ice	S = Sulfuric Acid + Ice	M = Methanol	O = Other
COLLECTION METHOD CODE	C = Composite	G=Grab	P= Pumping			O = Other

PO #	18-706	Devens - AOC50 Spring 2018 1082-052	**Chain of Custody Record**	Page: 2 of: 2

Company	KOMAN GS, LLC
Address:	293 Boston Post Road, Suite 100 Marlborough, MA 01752
Phone:	508-366-7442
Fax:	508-366-7445
Sampled by [Print Name(s)]/Affilliation	Kevin G. Anderson
Sampler(s) Signature(s)	[signature]

KGS

Laboratory:	Test America - Savannah
Address:	510 LaRoche Ave Savannah, GA 31404
Contact:	Jerry Lanier
Regulatory Facility No.	
Project Name:	Devens Spring 2018 LTM
Sampling QAP No.:	
Approval Date:	
TAT	Routine
Other:	

Preservatives (see codes)

Analyses Requested

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	H: VOCs/SW8260 3-40-ml VOA vials (HCl)	H: RSK175 3-40-ml VOA vials (HCl)	I: Sulfate-SW9056 1-125-ml poly	S: Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4)	O: Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH)	I: Alkalinity/SM2320B 1-250-ml poly	S: TOC/SW9060 1-500-ml amber glass (H2SO4)	N: Dissolved Metals*- FF SW6010/6020 1-250 ml poly (HNO3)	Total Metals (no FF)		Remarks	Lab. No.
66M-07-02X-SPR18	4/4/18	905	P	GW	12	X	X	X	X	X	X	X	X				
66M-DUP01-SPR18	4/4/18	910	P	GW	12	X	X	X	X	X	X	X	X				
66M-04-10A-SPR18	4/4/18	1035	P	GW	12	X	X	X	X	X	X	X	X				
66M-13-01X-SPR18	4/4/18	1245	P	GW	12	X	X	X	X	X	X	X	X				
RB-01-SPR18	4/4/18	1345	P	GW	12	X	X	X	X	X	X	X		X			
			P	GW													
TripBlank			O	O	2	X											
Shipping Details			courier pick up		2	← Total Number of Containers											

ALKALINITY TOC + NITRATE TO DENVER

Date Out:	Via:	Item No.	Relinquished by/Affiliation	Date	Time		Accepted by/Affiliation	Date	Time
Returned:	Via:		[signature]	4/4/18	1410		[signature]	4-7-18	1410
Additional Comments:			[signature]	4-7-18	1800		Reed Pott TH-Ven	4-5-18	0850

* = Dissolved Metals include: Fe, Mn (6010); As (6020)

email logins and results to:

lekes@komangs.com

Lab Comments

Preserve Where Applicable ☐

On ICE ☐

Temperature _____ C

☐ NJ Reduced
☐ NJ Full
☐ Full CLP
☐ Disk Deliverable
☐ Other (Specify)

MATRIX CODES: A = Air	GW = Groundwate	SE = Sediment	SP = Soil	SW = Surface Water	W = Water (Blanks)	O = Other
PRESERVATIVE CODES:	H = HCL + Ice	I = Ice Only	N = Nitric Acid + Ice	S = Sulfuric Acid + Ice	M = Methanol	O = Other
COLLECTION METHOD CODE	C = Composite	G=Grab	P= Pumping			O = Other

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-150689-1

Login Number: 150689

List Source: TestAmerica Savannah

List Number: 1

Creator: Ragnaldsen, Amy E

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.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-150689-1

Login Number: 150689
List Number: 2
Creator: Pottruff, Reed W

List Source: TestAmerica Denver
List Creation: 04/05/18 06:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-18
Alaska	State Program	10		06-30-18
Alaska (UST)	State Program	10	UST-104	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-18
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-18
GA Dept. of Agriculture	State Program	4	N/A	06-12-18
Georgia	State Program	4	803	06-30-18
Guam	State Program	9	15-005r	04-16-18
Hawaii	State Program	9	N/A	06-30-18
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-18
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-18
Kentucky (WW)	State Program	4	90084	12-31-18 *
L-A-B	DoD ELAP		L2463	09-22-19
L-A-B	ISO/IEC 17025		L2463.01	09-22-19
Louisiana	NELAP	6	30690	06-30-18
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-24-18
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-18
Michigan	State Program	5	9925	06-30-18
Mississippi	State Program	4	N/A	06-30-18
Nebraska	State Program	7	TestAmerica-Savannah	06-30-18
New Jersey	NELAP	2	GA769	06-30-18
New Mexico	State Program	6	N/A	06-30-18
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-18
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-18
Pennsylvania	NELAP	3	68-00474	06-30-18
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18
Tennessee	State Program	4	TN02961	06-30-18
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas	State Program	6	T104704185	06-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-17-00213	06-14-20 *
Virginia	NELAP	3	460161	06-14-18
Washington	State Program	10	C805	06-10-18
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-18
Wisconsin	State Program	5	999819810	08-31-18
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150689-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-150815-1
Client Project/Site: Fort Devens / AOC50 Spring 2018

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
4/23/2018 4:21:23 PM

Jerry Lanier, Project Manager I
(912)354-7858 e.3410
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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.

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Job ID: 680-150815-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC50 Spring 2018

Report Number: 680-150815-1

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 04/07/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.2º C and 1.3º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-13-04X_SPR18 (680-150815-1), G6M-13-05X_SPR18 (680-150815-2) and Trip Blank1_040518 (680-150815-3) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/11/2018.

The laboratory control sample duplicate (LCSD) for analytical batch 680-519533 recovered outside control limits for the following analytes: 1,2,3-Trichlorobenzene and Naphthalene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Refer to the QC report for details.

Sample G6M-13-05X_SPR18 (680-150815-2)[10X] 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-13-04X_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 04/12/2018.

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

METALS (ICP) - DISSOLVED
Samples G6M-13-04X_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/10/2018 and analyzed on 04/11/2018.

Iron and Manganese failed the recovery criteria high for the MS of sample G6M-13-04X_SPR18MS (680-150815-1) in batch 680-519787.

Iron and Manganese failed the recovery criteria low for the MSD of sample G6M-13-04X_SPR18MSD (680-150815-1) in batch 680-519787.

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 G6M-13-04X_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for Metals (ICPMS) - Dissolved in

Job ID: 680-150815-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

accordance with EPA SW-846 Method 6020A. The samples were prepared on 04/10/2018 and analyzed on 04/11/2018.

Arsenic failed the recovery criteria high for the MS of sample G6M-13-04X_SPR18MS (680-150815-1) in batch 680-519758.

Arsenic failed the recovery criteria low for the MSD of sample G6M-13-04X_SPR18MSD (680-150815-1) in batch 680-519758.

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.

ALKALINITY
Samples G6M-13-04X_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 04/10/2018.

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_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 04/16/2018.

Nitrate/Nitrite-N failed the recovery criteria low for the MS/MSD of sample G6M-13-04X_SPR18MS (680-150815-1) in batch 280-411490.

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-13-04X_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 04/09/2018.

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_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 04/12/2018.

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_SPR18 (680-150815-1) and G6M-13-05X_SPR18 (680-150815-2) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 04/16/2018 and 04/17/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-411580/35 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. Total Organic Carbon - Duplicates was detected in method blank MB 280-411580/4 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.

Sample G6M-13-05X_SPR18 (680-150815-2)[2.38X] 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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-150815-1	G6M-13-04X_SPR18	Water	04/05/18 09:05	04/07/18 09:42
680-150815-2	G6M-13-05X_SPR18	Water	04/05/18 11:05	04/07/18 09:42
680-150815-3	Trip Blank1_040518	Water	04/05/18 00:00	04/07/18 09:42

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
Q	One or more quality control criteria failed.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
D	The reported value is from a dilution.

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

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)

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: G6M-13-04X_SPR18
Date Collected: 04/05/18 09:05
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/11/18 16:17	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		04/11/18 16:17	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 16:17	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 16:17	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/11/18 16:17	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/11/18 16:17	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 16:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/11/18 16:17	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 16:17	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/11/18 16:17	1
Chloroethane	**3.5**	**J**	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 16:17	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/11/18 16:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 16:17	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 16:17	1
cis-1,2-Dichloroethene	**6.9**		1.0	1.0	0.41	ug/L		04/11/18 16:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/11/18 16:17	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/11/18 16:17	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 16:17	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 16:17	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 16:17	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/11/18 16:17	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 16:17	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/11/18 16:17	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 16:17	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/11/18 16:17	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/11/18 16:17	1
1,2-Dichloroethene, Total	**8.5**		2.0	1.0	0.74	ug/L		04/11/18 16:17	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/11/18 16:17	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 16:17	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 16:17	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 16:17	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 16:17	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 16:17	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/11/18 16:17	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 16:17	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 16:17	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/11/18 16:17	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/11/18 16:17	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 16:17	1
Naphthalene	5.0	U Q J1	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 16:17	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 16:17	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/11/18 16:17	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 16:17	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 16:17	1

Client Sample ID: G6M-13-04X_SPR18
Date Collected: 04/05/18 09:05
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 16:17	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 16:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/11/18 16:17	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/11/18 16:17	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 16:17	1
trans-1,2-Dichloroethene	**1.6**		1.0	1.0	0.37	ug/L		04/11/18 16:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 16:17	1
1,2,3-Trichlorobenzene	5.0	U Q J1	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 16:17	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 16:17	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 16:17	1
Trichloroethene	**4.1**		1.0	1.0	0.48	ug/L		04/11/18 16:17	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 16:17	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/11/18 16:17	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 16:17	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/11/18 16:17	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/11/18 16:17	1
Vinyl chloride	**8.6**		1.0	1.0	0.50	ug/L		04/11/18 16:17	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/11/18 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/11/18 16:17*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*04/11/18 16:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*04/11/18 16:17*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*04/11/18 16:17*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**8.6**		1.1	1.1	0.55	ug/L		04/12/18 11:38	1
Ethylene	**14**		1.0	1.0	0.50	ug/L		04/12/18 11:38	1
Methane (TCD)	**20000**		390	77	39	ug/L		04/12/18 11:38	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**4.5**		1.0	1.0	0.40	mg/L		04/12/18 18:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**34000**	**J1**	50	50	17	ug/L		04/11/18 17:07	1
Manganese	**7500**	**J1**	10	3.0	1.0	ug/L		04/11/18 17:07	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**350**	**J1**	3.0	3.0	1.5	ug/L		04/11/18 12:08	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.062**	**J J1**	0.10	0.050	0.019	mg/L		04/16/18 18:26	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**1.8**		1.0	0.50	0.16	mg/L		04/17/18 00:30	1
Alkalinity	**210**		5.0	3.2	1.1	mg/L		04/10/18 20:06	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: G6M-13-05X_SPR18
Date Collected: 04/05/18 11:05
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	**78**	**J D**	100	100	70	ug/L		04/11/18 12:30	10
Benzene	10	U	10	10	4.3	ug/L		04/11/18 12:30	10
Bromobenzene	10	U	10	10	5.0	ug/L		04/11/18 12:30	10
Bromoform	10	U	10	10	4.3	ug/L		04/11/18 12:30	10
Bromomethane	50	U	50	50	25	ug/L		04/11/18 12:30	10
2-Butanone (MEK)	**71**	**J D**	100	100	34	ug/L		04/11/18 12:30	10
Carbon disulfide	20	U	20	20	4.3	ug/L		04/11/18 12:30	10
Carbon tetrachloride	5.0	U	10	5.0	3.3	ug/L		04/11/18 12:30	10
Chlorobenzene	5.0	U	10	5.0	2.6	ug/L		04/11/18 12:30	10
Chlorobromomethane	10	U	10	10	4.5	ug/L		04/11/18 12:30	10
Chlorodibromomethane	5.0	U	10	5.0	3.2	ug/L		04/11/18 12:30	10
Chloroethane	50	U	50	50	25	ug/L		04/11/18 12:30	10
Chloroform	10	U	10	10	5.0	ug/L		04/11/18 12:30	10
Chloromethane	10	U	10	10	4.0	ug/L		04/11/18 12:30	10
2-Chlorotoluene	5.0	U	10	5.0	2.7	ug/L		04/11/18 12:30	10
4-Chlorotoluene	10	U	10	10	4.5	ug/L		04/11/18 12:30	10
cis-1,2-Dichloroethene	**410**	**D**	10	10	4.1	ug/L		04/11/18 12:30	10
cis-1,3-Dichloropropene	10	U	10	10	4.0	ug/L		04/11/18 12:30	10
1,2-Dibromo-3-Chloropropane	20	U	50	20	11	ug/L		04/11/18 12:30	10
Dibromomethane	10	U	10	10	3.5	ug/L		04/11/18 12:30	10
1,2-Dichlorobenzene	10	U	10	10	3.7	ug/L		04/11/18 12:30	10
1,3-Dichlorobenzene	10	U	10	10	4.3	ug/L		04/11/18 12:30	10
1,4-Dichlorobenzene	10	U	10	10	4.6	ug/L		04/11/18 12:30	10
Dichlorobromomethane	10	U	10	10	4.4	ug/L		04/11/18 12:30	10
Dichlorodifluoromethane	10	U	10	10	6.0	ug/L		04/11/18 12:30	10
1,1-Dichloroethane	10	U	10	10	3.8	ug/L		04/11/18 12:30	10
1,2-Dichloroethane	10	U M	10	10	5.0	ug/L		04/11/18 12:30	10
1,1-Dichloroethene	10	U	10	10	3.6	ug/L		04/11/18 12:30	10
1,2-Dichloroethene, Total	**410**	**D**	20	10	7.4	ug/L		04/11/18 12:30	10
1,2-Dichloropropane	10	U	10	10	6.7	ug/L		04/11/18 12:30	10
1,3-Dichloropropane	10	U	10	10	3.4	ug/L		04/11/18 12:30	10
2,2-Dichloropropane	10	U	10	10	3.7	ug/L		04/11/18 12:30	10
1,1-Dichloropropene	10	U	10	10	3.4	ug/L		04/11/18 12:30	10
Ethylbenzene	5.0	U	10	5.0	3.3	ug/L		04/11/18 12:30	10
Ethylene Dibromide	10	U	10	10	4.4	ug/L		04/11/18 12:30	10
Hexachlorobutadiene	50	U	50	50	25	ug/L		04/11/18 12:30	10
2-Hexanone	50	U	100	50	20	ug/L		04/11/18 12:30	10
Isopropylbenzene	10	U	10	10	3.5	ug/L		04/11/18 12:30	10
4-Isopropyltoluene	10	U	10	10	4.8	ug/L		04/11/18 12:30	10
Methylene Chloride	50	U	50	50	25	ug/L		04/11/18 12:30	10
4-Methyl-2-pentanone (MIBK)	50	U	100	50	21	ug/L		04/11/18 12:30	10
Methyl tert-butyl ether	5.0	U	100	5.0	3.0	ug/L		04/11/18 12:30	10
m-Xylene & p-Xylene	10	U	10	10	3.5	ug/L		04/11/18 12:30	10
Naphthalene	50	U Q	50	50	25	ug/L		04/11/18 12:30	10
n-Butylbenzene	10	U	10	10	4.7	ug/L		04/11/18 12:30	10
N-Propylbenzene	10	U	10	10	3.8	ug/L		04/11/18 12:30	10
o-Xylene	5.0	U	10	5.0	2.3	ug/L		04/11/18 12:30	10
sec-Butylbenzene	10	U	10	10	4.2	ug/L		04/11/18 12:30	10
Styrene	5.0	U	10	5.0	2.7	ug/L		04/11/18 12:30	10

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: G6M-13-05X_SPR18
Date Collected: 04/05/18 11:05
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	10	U	10	10	4.5	ug/L		04/11/18 12:30	10
1,1,1,2-Tetrachloroethane	10	U	10	10	3.7	ug/L		04/11/18 12:30	10
1,1,2,2-Tetrachloroethane	10	U	10	10	6.2	ug/L		04/11/18 12:30	10
Tetrachloroethene	**59**	**D**	10	10	7.4	ug/L		04/11/18 12:30	10
Toluene	10	U	10	10	4.8	ug/L		04/11/18 12:30	10
trans-1,2-Dichloroethene	10	U	10	10	3.7	ug/L		04/11/18 12:30	10
trans-1,3-Dichloropropene	10	U	10	10	4.2	ug/L		04/11/18 12:30	10
1,2,3-Trichlorobenzene	50	U Q	50	50	25	ug/L		04/11/18 12:30	10
1,2,4-Trichlorobenzene	50	U	50	50	25	ug/L		04/11/18 12:30	10
1,1,1-Trichloroethane	10	U	10	10	3.7	ug/L		04/11/18 12:30	10
1,1,2-Trichloroethane	5.0	U	10	5.0	3.3	ug/L		04/11/18 12:30	10
Trichloroethene	**81**	**D**	10	10	4.8	ug/L		04/11/18 12:30	10
Trichlorofluoromethane	10	U	10	10	4.2	ug/L		04/11/18 12:30	10
1,2,3-Trichloropropane	10	U	10	10	3.9	ug/L		04/11/18 12:30	10
1,2,4-Trimethylbenzene	10	U	10	10	4.7	ug/L		04/11/18 12:30	10
1,3,5-Trimethylbenzene	5.0	U	10	5.0	3.1	ug/L		04/11/18 12:30	10
Vinyl acetate	20	U	20	20	8.1	ug/L		04/11/18 12:30	10
Vinyl chloride	**5.6**	**J D**	10	10	5.0	ug/L		04/11/18 12:30	10
Xylenes, Total	5.0	U	20	5.0	2.3	ug/L		04/11/18 12:30	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/11/18 12:30*	*10*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*04/11/18 12:30*	*10*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*04/11/18 12:30*	*10*
Toluene-d8 (Surr)	*98*		*89 - 112*		*04/11/18 12:30*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.75**	**J**	1.1	1.1	0.55	ug/L		04/12/18 12:17	1
Ethylene	**1.1**		1.0	1.0	0.50	ug/L		04/12/18 12:17	1
Methane (TCD)	**6800**		390	77	39	ug/L		04/12/18 12:17	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**0.95**	**J**	1.0	1.0	0.40	mg/L		04/12/18 19:34	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**32000**		50	50	17	ug/L		04/11/18 17:44	1
Manganese	**3900**		10	3.0	1.0	ug/L		04/11/18 17:44	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**85**		3.0	3.0	1.5	ug/L		04/11/18 12:25	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.10**		0.10	0.050	0.019	mg/L		04/16/18 18:32	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1
Total Organic Carbon - Duplicates	**85**		2.4	1.2	0.37	mg/L		04/16/18 16:24	2.38
Alkalinity	**77**		5.0	3.2	1.1	mg/L		04/10/18 20:40	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: Trip Blank1_040518
Date Collected: 04/05/18 00:00
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/11/18 12:07	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 12:07	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 12:07	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 12:07	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/11/18 12:07	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/11/18 12:07	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 12:07	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/11/18 12:07	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 12:07	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/11/18 12:07	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 12:07	1
Chloromethane	**0.51**	**J**	1.0	1.0	0.40	ug/L		04/11/18 12:07	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 12:07	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 12:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/11/18 12:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/11/18 12:07	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/11/18 12:07	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 12:07	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 12:07	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 12:07	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/11/18 12:07	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 12:07	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/11/18 12:07	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 12:07	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/11/18 12:07	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/11/18 12:07	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/11/18 12:07	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/11/18 12:07	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 12:07	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 12:07	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 12:07	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 12:07	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 12:07	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/11/18 12:07	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 12:07	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 12:07	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/11/18 12:07	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/11/18 12:07	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 12:07	1
Naphthalene	5.0	U Q	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 12:07	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 12:07	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/11/18 12:07	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 12:07	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 12:07	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: Trip Blank1_040518
Date Collected: 04/05/18 00:00
Date Received: 04/07/18 09:42

Lab Sample ID: 680-150815-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 12:07	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 12:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/11/18 12:07	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/11/18 12:07	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 12:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 12:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 12:07	1
1,2,3-Trichlorobenzene	5.0	U Q	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 12:07	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 12:07	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 12:07	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 12:07	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 12:07	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/11/18 12:07	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 12:07	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/11/18 12:07	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/11/18 12:07	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 12:07	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/11/18 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/11/18 12:07*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*04/11/18 12:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/11/18 12:07*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*04/11/18 12:07*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(85-114)	(80-119)	(81-118)	(89-112)
680-150815-1	G6M-13-04X_SPR18	94	99	94	103
680-150815-1 MS	G6M-13-04X_SPR18	92	97	91	101
680-150815-1 MSD	G6M-13-04X_SPR18	94	99	93	101
680-150815-2	G6M-13-05X_SPR18	94	106	105	98
680-150815-3	Trip Blank1_040518	95	99	93	103
LCS 680-519533/4	Lab Control Sample	104	111	108	108
LCSD 680-519533/5	Lab Control Sample Dup	105	109	104	109
MB 680-519533/9	Method Blank	95	98	93	100

Surrogate Legend

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

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

Lab Sample ID: MB 680-519533/9
Matrix: Water
Analysis Batch: 519533

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		04/11/18 11:45	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 11:45	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 11:45	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 11:45	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		04/11/18 11:45	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		04/11/18 11:45	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 11:45	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		04/11/18 11:45	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 11:45	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		04/11/18 11:45	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 11:45	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		04/11/18 11:45	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 11:45	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 11:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		04/11/18 11:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		04/11/18 11:45	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		04/11/18 11:45	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 11:45	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 11:45	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		04/11/18 11:45	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		04/11/18 11:45	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 11:45	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		04/11/18 11:45	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 11:45	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		04/11/18 11:45	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		04/11/18 11:45	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		04/11/18 11:45	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		04/11/18 11:45	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 11:45	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 11:45	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		04/11/18 11:45	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 11:45	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		04/11/18 11:45	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		04/11/18 11:45	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 11:45	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 11:45	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		04/11/18 11:45	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		04/11/18 11:45	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		04/11/18 11:45	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 11:45	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		04/11/18 11:45	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		04/11/18 11:45	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 11:45	1

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

Lab Sample ID: MB 680-519533/9
Matrix: Water
Analysis Batch: 519533

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Styrene	0.50	U	1.0	0.50	0.27	ug/L		04/11/18 11:45	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		04/11/18 11:45	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 11:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		04/11/18 11:45	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		04/11/18 11:45	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 11:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 11:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 11:45	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		04/11/18 11:45	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		04/11/18 11:45	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		04/11/18 11:45	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		04/11/18 11:45	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		04/11/18 11:45	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		04/11/18 11:45	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		04/11/18 11:45	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		04/11/18 11:45	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		04/11/18 11:45	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		04/11/18 11:45	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		04/11/18 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*04/11/18 11:45*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*04/11/18 11:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*04/11/18 11:45*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*04/11/18 11:45*	*1*

Lab Sample ID: LCS 680-519533/4
Matrix: Water
Analysis Batch: 519533

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	284		ug/L		113	39 - 160
Benzene	50.0	53.8		ug/L		108	79 - 120
Bromobenzene	50.0	57.5		ug/L		115	80 - 120
Bromoform	50.0	62.9		ug/L		126	66 - 130
Bromomethane	50.0	57.4		ug/L		115	53 - 141
2-Butanone (MEK)	250	294		ug/L		118	56 - 143
Carbon disulfide	50.0	51.3		ug/L		103	64 - 133
Carbon tetrachloride	50.0	52.5		ug/L		105	72 - 136
Chlorobenzene	50.0	55.2		ug/L		110	82 - 118
Chlorobromomethane	50.0	54.5		ug/L		109	78 - 123
Chlorodibromomethane	50.0	60.3		ug/L		121	74 - 126
Chloroethane	50.0	52.0		ug/L		104	60 - 138
Chloroform	50.0	54.2		ug/L		108	79 - 124
Chloromethane	50.0	50.0		ug/L		100	50 - 139
2-Chlorotoluene	50.0	55.1		ug/L		110	79 - 122
4-Chlorotoluene	50.0	56.2		ug/L		112	78 - 122

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

Lab Sample ID: LCS 680-519533/4
Matrix: Water
Analysis Batch: 519533

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	55.1		ug/L		110	78 - 123
cis-1,3-Dichloropropene	50.0	59.9		ug/L		120	75 - 124
1,2-Dibromo-3-Chloropropane	50.0	55.6		ug/L		111	62 - 128
Dibromomethane	50.0	55.6		ug/L		111	79 - 123
1,2-Dichlorobenzene	50.0	53.5		ug/L		107	80 - 119
1,3-Dichlorobenzene	50.0	54.2		ug/L		108	80 - 119
1,4-Dichlorobenzene	50.0	53.7		ug/L		107	79 - 118
Dichlorobromomethane	50.0	57.4		ug/L		115	79 - 125
Dichlorodifluoromethane	50.0	45.3		ug/L		91	32 - 152
1,1-Dichloroethane	50.0	54.9		ug/L		110	77 - 125
1,2-Dichloroethane	50.0	54.9		ug/L		110	73 - 128
1,1-Dichloroethene	50.0	51.5		ug/L		103	71 - 131
1,2-Dichloroethene, Total	100	108		ug/L		108	79 - 121
1,2-Dichloropropane	50.0	57.1		ug/L		114	78 - 122
1,3-Dichloropropane	50.0	57.0		ug/L		114	80 - 119
2,2-Dichloropropane	50.0	56.0		ug/L		112	60 - 139
1,1-Dichloropropene	50.0	52.5		ug/L		105	79 - 125
Ethylbenzene	50.0	54.5		ug/L		109	79 - 121
Ethylene Dibromide	50.0	57.5		ug/L		115	75 - 127
Hexachlorobutadiene	50.0	53.5		ug/L		107	66 - 134
2-Hexanone	250	307		ug/L		123	57 - 139
Isopropylbenzene	50.0	55.4		ug/L		111	72 - 131
4-Isopropyltoluene	50.0	54.2		ug/L		108	77 - 127
Methylene Chloride	50.0	54.8		ug/L		110	74 - 124
4-Methyl-2-pentanone (MIBK)	250	303		ug/L		121	67 - 130
Methyl tert-butyl ether	50.0	56.8		ug/L		114	71 - 124
m-Xylene & p-Xylene	50.0	55.9		ug/L		112	80 - 121
Naphthalene	50.0	58.3		ug/L		117	61 - 128
n-Butylbenzene	50.0	53.7		ug/L		107	75 - 128
N-Propylbenzene	50.0	55.5		ug/L		111	76 - 126
o-Xylene	50.0	56.6		ug/L		113	78 - 122
sec-Butylbenzene	50.0	54.8		ug/L		110	77 - 126
Styrene	50.0	58.9		ug/L		118	78 - 123
tert-Butylbenzene	50.0	55.6		ug/L		111	78 - 124
1,1,1,2-Tetrachloroethane	50.0	58.4		ug/L		117	78 - 124
1,1,2,2-Tetrachloroethane	50.0	55.5		ug/L		111	71 - 121
Tetrachloroethene	50.0	53.0		ug/L		106	74 - 129
Toluene	50.0	55.4		ug/L		111	80 - 121
trans-1,2-Dichloroethene	50.0	53.2		ug/L		106	75 - 124
trans-1,3-Dichloropropene	50.0	60.5		ug/L		121	73 - 127
1,2,3-Trichlorobenzene	50.0	54.2		ug/L		108	69 - 129
1,2,4-Trichlorobenzene	50.0	51.4		ug/L		103	69 - 130
1,1,1-Trichloroethane	50.0	52.5		ug/L		105	74 - 131
1,1,2-Trichloroethane	50.0	56.9		ug/L		114	80 - 119
Trichloroethene	50.0	53.3		ug/L		107	79 - 123
Trichlorofluoromethane	50.0	50.9		ug/L		102	65 - 141
1,2,3-Trichloropropane	50.0	56.3		ug/L		113	73 - 122
1,2,4-Trimethylbenzene	50.0	56.8		ug/L		114	76 - 124

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

Lab Sample ID: LCS 680-519533/4
Matrix: Water
Analysis Batch: 519533

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	56.6		ug/L		113	75 - 124
Vinyl acetate	100	131		ug/L		131	54 - 146
Vinyl chloride	50.0	47.1		ug/L		94	58 - 137
Xylenes, Total	100	113		ug/L		113	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*
Dibromofluoromethane (Surr)	*111*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*
Toluene-d8 (Surr)	*108*		*89 - 112*

Lab Sample ID: LCSD 680-519533/5
Matrix: Water
Analysis Batch: 519533

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	250	280		ug/L		112	39 - 160	1	20
Benzene	50.0	53.3		ug/L		107	79 - 120	1	20
Bromobenzene	50.0	57.7		ug/L		115	80 - 120	0	20
Bromoform	50.0	62.5		ug/L		125	66 - 130	1	20
Bromomethane	50.0	59.2		ug/L		118	53 - 141	3	20
2-Butanone (MEK)	250	281		ug/L		112	56 - 143	5	20
Carbon disulfide	50.0	51.5		ug/L		103	64 - 133	1	20
Carbon tetrachloride	50.0	53.0		ug/L		106	72 - 136	1	20
Chlorobenzene	50.0	55.5		ug/L		111	82 - 118	1	20
Chlorobromomethane	50.0	53.2		ug/L		106	78 - 123	2	20
Chlorodibromomethane	50.0	58.5		ug/L		117	74 - 126	3	20
Chloroethane	50.0	52.5		ug/L		105	60 - 138	1	20
Chloroform	50.0	53.6		ug/L		107	79 - 124	1	20
Chloromethane	50.0	50.7		ug/L		101	50 - 139	1	20
2-Chlorotoluene	50.0	55.8		ug/L		112	79 - 122	1	20
4-Chlorotoluene	50.0	56.3		ug/L		113	78 - 122	0	20
cis-1,2-Dichloroethene	50.0	54.7		ug/L		109	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	58.9		ug/L		118	75 - 124	2	20
1,2-Dibromo-3-Chloropropane	50.0	56.6		ug/L		113	62 - 128	2	20
Dibromomethane	50.0	54.1		ug/L		108	79 - 123	3	20
1,2-Dichlorobenzene	50.0	54.0		ug/L		108	80 - 119	1	20
1,3-Dichlorobenzene	50.0	55.2		ug/L		110	80 - 119	2	20
1,4-Dichlorobenzene	50.0	54.1		ug/L		108	79 - 118	1	20
Dichlorobromomethane	50.0	56.8		ug/L		114	79 - 125	1	20
Dichlorodifluoromethane	50.0	46.3		ug/L		93	32 - 152	2	20
1,1-Dichloroethane	50.0	54.4		ug/L		109	77 - 125	1	20
1,2-Dichloroethane	50.0	54.0		ug/L		108	73 - 128	2	20
1,1-Dichloroethene	50.0	50.5		ug/L		101	71 - 131	2	20
1,2-Dichloroethene, Total	100	108		ug/L		108	79 - 121	0	20
1,2-Dichloropropane	50.0	56.8		ug/L		114	78 - 122	1	20
1,3-Dichloropropane	50.0	56.0		ug/L		112	80 - 119	2	20
2,2-Dichloropropane	50.0	56.4		ug/L		113	60 - 139	1	20

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

Lab Sample ID: LCSD 680-519533/5
Matrix: Water
Analysis Batch: 519533

Client Sample 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-Dichloropropene			50.0	53.0		ug/L		106	79 - 125	1	20
Ethylbenzene			50.0	55.5		ug/L		111	79 - 121	2	20
Ethylene Dibromide			50.0	56.4		ug/L		113	75 - 127	2	20
Hexachlorobutadiene			50.0	55.0		ug/L		110	66 - 134	3	20
2-Hexanone			250	296		ug/L		118	57 - 139	4	20
Isopropylbenzene			50.0	56.6		ug/L		113	72 - 131	2	20
4-Isopropyltoluene			50.0	55.4		ug/L		111	77 - 127	2	20
Methylene Chloride			50.0	53.7		ug/L		107	74 - 124	2	20
4-Methyl-2-pentanone (MIBK)			250	294		ug/L		118	67 - 130	3	20
Methyl tert-butyl ether			50.0	56.0		ug/L		112	71 - 124	1	20
m-Xylene & p-Xylene			50.0	55.9		ug/L		112	80 - 121	0	20
Naphthalene			50.0	68.4	Q	ug/L		137	61 - 128	16	20
n-Butylbenzene			50.0	54.7		ug/L		109	75 - 128	2	20
N-Propylbenzene			50.0	56.2		ug/L		112	76 - 126	1	20
o-Xylene			50.0	56.7		ug/L		113	78 - 122	0	20
sec-Butylbenzene			50.0	56.3		ug/L		113	77 - 126	3	20
Styrene			50.0	58.8		ug/L		118	78 - 123	0	20
tert-Butylbenzene			50.0	56.4		ug/L		113	78 - 124	1	20
1,1,1,2-Tetrachloroethane			50.0	58.6		ug/L		117	78 - 124	0	20
1,1,2,2-Tetrachloroethane			50.0	55.1		ug/L		110	71 - 121	1	20
Tetrachloroethene			50.0	52.8		ug/L		106	74 - 129	0	20
Toluene			50.0	54.9		ug/L		110	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	53.4		ug/L		107	75 - 124	0	20
trans-1,3-Dichloropropene			50.0	59.7		ug/L		119	73 - 127	1	20
1,2,3-Trichlorobenzene			50.0	65.1	Q	ug/L		130	69 - 129	18	20
1,2,4-Trichlorobenzene			50.0	55.3		ug/L		111	69 - 130	7	20
1,1,1-Trichloroethane			50.0	52.7		ug/L		105	74 - 131	0	20
1,1,2-Trichloroethane			50.0	56.1		ug/L		112	80 - 119	1	20
Trichloroethene			50.0	54.0		ug/L		108	79 - 123	1	20
Trichlorofluoromethane			50.0	52.4		ug/L		105	65 - 141	3	20
1,2,3-Trichloropropane			50.0	55.6		ug/L		111	73 - 122	1	20
1,2,4-Trimethylbenzene			50.0	57.1		ug/L		114	76 - 124	0	20
1,3,5-Trimethylbenzene			50.0	57.2		ug/L		114	75 - 124	1	20
Vinyl acetate			100	126		ug/L		126	54 - 146	3	20
Vinyl chloride			50.0	48.2		ug/L		96	58 - 137	2	20
Xylenes, Total			100	113		ug/L		113	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*109*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*
Toluene-d8 (Surr)	*109*		*89 - 112*

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

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519533

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	250	225		ug/L		90	39 - 160
Benzene	1.0	U M	50.0	49.5		ug/L		99	79 - 120
Bromobenzene	1.0	U	50.0	51.3		ug/L		103	80 - 120
Bromoform	1.0	U	50.0	53.0		ug/L		106	66 - 130
Bromomethane	5.0	U	50.0	56.1		ug/L		112	53 - 141
2-Butanone (MEK)	10	U	250	231		ug/L		92	56 - 143
Carbon disulfide	2.0	U	50.0	51.8		ug/L		104	64 - 133
Carbon tetrachloride	0.50	U	50.0	51.0		ug/L		102	72 - 136
Chlorobenzene	0.50	U	50.0	50.1		ug/L		100	82 - 118
Chlorobromomethane	1.0	U	50.0	47.2		ug/L		94	78 - 123
Chlorodibromomethane	0.50	U	50.0	50.6		ug/L		101	74 - 126
Chloroethane	3.5	J	50.0	56.9		ug/L		107	60 - 138
Chloroform	1.0	U	50.0	48.2		ug/L		96	79 - 124
Chloromethane	1.0	U	50.0	56.3		ug/L		113	50 - 139
2-Chlorotoluene	0.50	U	50.0	51.2		ug/L		102	79 - 122
4-Chlorotoluene	1.0	U	50.0	51.1		ug/L		102	78 - 122
cis-1,2-Dichloroethene	6.9		50.0	55.7		ug/L		98	78 - 123
cis-1,3-Dichloropropene	1.0	U	50.0	49.3		ug/L		99	75 - 124
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	43.3		ug/L		87	62 - 128
Dibromomethane	1.0	U	50.0	46.0		ug/L		92	79 - 123
1,2-Dichlorobenzene	1.0	U	50.0	47.6		ug/L		95	80 - 119
1,3-Dichlorobenzene	1.0	U	50.0	48.9		ug/L		98	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	48.1		ug/L		96	79 - 118
Dichlorobromomethane	1.0	U	50.0	49.5		ug/L		99	79 - 125
Dichlorodifluoromethane	1.0	U	50.0	58.1		ug/L		116	32 - 152
1,1-Dichloroethane	1.0	U	50.0	50.0		ug/L		100	77 - 125
1,2-Dichloroethane	1.0	U M	50.0	46.5		ug/L		93	73 - 128
1,1-Dichloroethene	1.0	U	50.0	52.3		ug/L		105	71 - 131
1,2-Dichloroethene, Total	8.5		100	108		ug/L		99	79 - 121
1,2-Dichloropropane	1.0	U	50.0	49.3		ug/L		99	78 - 122
1,3-Dichloropropane	1.0	U	50.0	47.1		ug/L		94	80 - 119
2,2-Dichloropropane	1.0	U	50.0	47.3		ug/L		95	60 - 139
1,1-Dichloropropene	1.0	U	50.0	50.7		ug/L		101	79 - 125
Ethylbenzene	0.50	U	50.0	51.5		ug/L		103	79 - 121
Ethylene Dibromide	1.0	U	50.0	47.6		ug/L		95	75 - 127
Hexachlorobutadiene	5.0	U	50.0	45.0		ug/L		90	66 - 134
2-Hexanone	5.0	U	250	245		ug/L		98	57 - 139
Isopropylbenzene	1.0	U	50.0	52.8		ug/L		106	72 - 131
4-Isopropyltoluene	1.0	U	50.0	50.3		ug/L		101	77 - 127
Methylene Chloride	5.0	U	50.0	48.7		ug/L		97	74 - 124
4-Methyl-2-pentanone (MIBK)	5.0	U	250	243		ug/L		97	67 - 130
Methyl tert-butyl ether	0.50	U	50.0	47.6		ug/L		95	71 - 124
m-Xylene & p-Xylene	1.0	U	50.0	52.1		ug/L		104	80 - 121
Naphthalene	5.0	U Q J1	50.0	37.4		ug/L		75	61 - 128
n-Butylbenzene	1.0	U	50.0	49.9		ug/L		100	75 - 128
N-Propylbenzene	1.0	U	50.0	52.6		ug/L		105	76 - 126
o-Xylene	0.50	U	50.0	51.5		ug/L		103	78 - 122
sec-Butylbenzene	1.0	U	50.0	52.2		ug/L		104	77 - 126

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

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519533

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	0.50	U	50.0	52.8		ug/L		106	78 - 123
tert-Butylbenzene	1.0	U	50.0	52.4		ug/L		105	78 - 124
1,1,1,2-Tetrachloroethane	1.0	U	50.0	52.0		ug/L		104	78 - 124
1,1,2,2-Tetrachloroethane	1.0	U	50.0	47.1		ug/L		94	71 - 121
Tetrachloroethene	1.0	U	50.0	50.8		ug/L		102	74 - 129
Toluene	1.0	U	50.0	50.0		ug/L		100	80 - 121
trans-1,2-Dichloroethene	1.6		50.0	52.1		ug/L		101	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	49.3		ug/L		99	73 - 127
1,2,3-Trichlorobenzene	5.0	U Q J1	50.0	35.2		ug/L		70	69 - 129
1,2,4-Trichlorobenzene	5.0	U	50.0	39.8		ug/L		80	69 - 130
1,1,1-Trichloroethane	1.0	U	50.0	50.0		ug/L		100	74 - 131
1,1,2-Trichloroethane	0.50	U	50.0	47.6		ug/L		95	80 - 119
Trichloroethene	4.1		50.0	53.2		ug/L		98	79 - 123
Trichlorofluoromethane	1.0	U	50.0	53.5		ug/L		107	65 - 141
1,2,3-Trichloropropane	1.0	U	50.0	47.0		ug/L		94	73 - 122
1,2,4-Trimethylbenzene	1.0	U	50.0	51.8		ug/L		104	76 - 124
1,3,5-Trimethylbenzene	0.50	U	50.0	52.8		ug/L		106	75 - 124
Vinyl acetate	2.0	U	100	107		ug/L		107	54 - 146
Vinyl chloride	8.6		50.0	61.7		ug/L		106	58 - 137
Xylenes, Total	0.50	U	100	104		ug/L		104	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*
Toluene-d8 (Surr)	*101*		*89 - 112*

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519533

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	250	241		ug/L		96	39 - 160	7	20
Benzene	1.0	U M	50.0	50.1		ug/L		100	79 - 120	1	20
Bromobenzene	1.0	U	50.0	51.6		ug/L		103	80 - 120	1	20
Bromoform	1.0	U	50.0	53.8		ug/L		108	66 - 130	1	20
Bromomethane	5.0	U	50.0	60.9		ug/L		122	53 - 141	8	20
2-Butanone (MEK)	10	U	250	245		ug/L		98	56 - 143	6	20
Carbon disulfide	2.0	U	50.0	52.1		ug/L		104	64 - 133	1	20
Carbon tetrachloride	0.50	U	50.0	50.2		ug/L		100	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	49.8		ug/L		100	82 - 118	1	20
Chlorobromomethane	1.0	U	50.0	48.7		ug/L		97	78 - 123	3	20
Chlorodibromomethane	0.50	U	50.0	51.4		ug/L		103	74 - 126	2	20
Chloroethane	3.5	J	50.0	59.3		ug/L		112	60 - 138	4	20
Chloroform	1.0	U	50.0	49.2		ug/L		98	79 - 124	2	20
Chloromethane	1.0	U	50.0	57.7		ug/L		115	50 - 139	2	20
2-Chlorotoluene	0.50	U	50.0	49.7		ug/L		99	79 - 122	3	20
4-Chlorotoluene	1.0	U	50.0	50.6		ug/L		101	78 - 122	1	20

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

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519533

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	6.9		50.0	57.2		ug/L		101	78 - 123	3	20
cis-1,3-Dichloropropene	1.0	U	50.0	50.6		ug/L		101	75 - 124	3	20
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	49.9		ug/L		100	62 - 128	14	20
Dibromomethane	1.0	U	50.0	47.5		ug/L		95	79 - 123	3	20
1,2-Dichlorobenzene	1.0	U	50.0	48.4		ug/L		97	80 - 119	2	20
1,3-Dichlorobenzene	1.0	U	50.0	49.9		ug/L		100	80 - 119	2	20
1,4-Dichlorobenzene	1.0	U	50.0	48.9		ug/L		98	79 - 118	2	20
Dichlorobromomethane	1.0	U	50.0	50.6		ug/L		101	79 - 125	2	20
Dichlorodifluoromethane	1.0	U	50.0	58.8		ug/L		118	32 - 152	1	20
1,1-Dichloroethane	1.0	U	50.0	51.3		ug/L		103	77 - 125	3	20
1,2-Dichloroethane	1.0	U M	50.0	48.4		ug/L		97	73 - 128	4	20
1,1-Dichloroethene	1.0	U	50.0	53.5		ug/L		107	71 - 131	2	20
1,2-Dichloroethene, Total	8.5		100	110		ug/L		101	79 - 121	2	20
1,2-Dichloropropane	1.0	U	50.0	50.9		ug/L		102	78 - 122	3	20
1,3-Dichloropropane	1.0	U	50.0	48.8		ug/L		98	80 - 119	4	20
2,2-Dichloropropane	1.0	U	50.0	47.8		ug/L		96	60 - 139	1	20
1,1-Dichloropropene	1.0	U	50.0	50.2		ug/L		100	79 - 125	1	20
Ethylbenzene	0.50	U	50.0	50.3		ug/L		101	79 - 121	2	20
Ethylene Dibromide	1.0	U	50.0	48.3		ug/L		97	75 - 127	1	20
Hexachlorobutadiene	5.0	U	50.0	48.1		ug/L		96	66 - 134	7	20
2-Hexanone	5.0	U	250	257		ug/L		103	57 - 139	5	20
Isopropylbenzene	1.0	U	50.0	51.4		ug/L		103	72 - 131	3	20
4-Isopropyltoluene	1.0	U	50.0	50.7		ug/L		101	77 - 127	1	20
Methylene Chloride	5.0	U	50.0	50.8		ug/L		102	74 - 124	4	20
4-Methyl-2-pentanone (MIBK)	5.0	U	250	254		ug/L		102	67 - 130	4	20
Methyl tert-butyl ether	0.50	U	50.0	49.5		ug/L		99	71 - 124	4	20
m-Xylene & p-Xylene	1.0	U	50.0	50.6		ug/L		101	80 - 121	3	20
Naphthalene	5.0	U Q J1	50.0	55.2	J1	ug/L		110	61 - 128	39	20
n-Butylbenzene	1.0	U	50.0	49.8		ug/L		100	75 - 128	0	20
N-Propylbenzene	1.0	U	50.0	50.8		ug/L		102	76 - 126	3	20
o-Xylene	0.50	U	50.0	50.9		ug/L		102	78 - 122	1	20
sec-Butylbenzene	1.0	U	50.0	50.2		ug/L		100	77 - 126	4	20
Styrene	0.50	U	50.0	52.3		ug/L		105	78 - 123	1	20
tert-Butylbenzene	1.0	U	50.0	50.5		ug/L		101	78 - 124	4	20
1,1,1,2-Tetrachloroethane	1.0	U	50.0	52.1		ug/L		104	78 - 124	0	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	50.3		ug/L		101	71 - 121	6	20
Tetrachloroethene	1.0	U	50.0	49.3		ug/L		99	74 - 129	3	20
Toluene	1.0	U	50.0	50.1		ug/L		100	80 - 121	0	20
trans-1,2-Dichloroethene	1.6		50.0	52.7		ug/L		102	75 - 124	1	20
trans-1,3-Dichloropropene	1.0	U	50.0	50.7		ug/L		101	73 - 127	3	20
1,2,3-Trichlorobenzene	5.0	U Q J1	50.0	51.9	J1	ug/L		104	69 - 129	38	20
1,2,4-Trichlorobenzene	5.0	U	50.0	47.3		ug/L		95	69 - 130	17	20
1,1,1-Trichloroethane	1.0	U	50.0	50.3		ug/L		101	74 - 131	0	20
1,1,2-Trichloroethane	0.50	U	50.0	49.5		ug/L		99	80 - 119	4	20
Trichloroethene	4.1		50.0	53.6		ug/L		99	79 - 123	1	20
Trichlorofluoromethane	1.0	U	50.0	52.0		ug/L		104	65 - 141	3	20
1,2,3-Trichloropropane	1.0	U	50.0	48.4		ug/L		97	73 - 122	3	20
1,2,4-Trimethylbenzene	1.0	U	50.0	51.0		ug/L		102	76 - 124	2	20

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

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519533

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	0.50	U	50.0	51.1		ug/L		102	75 - 124	3	20
Vinyl acetate	2.0	U	100	114		ug/L		114	54 - 146	6	20
Vinyl chloride	8.6		50.0	62.8		ug/L		108	58 - 137	2	20
Xylenes, Total	0.50	U	100	102		ug/L		102	79 - 121	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
Toluene-d8 (Surr)	*101*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-519749/8
Matrix: Water
Analysis Batch: 519749

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		04/12/18 11:01	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		04/12/18 11:01	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		04/12/18 11:01	1
Methane (TCD)	77	U	390	77	39	ug/L		04/12/18 11:01	1

Lab Sample ID: LCS 680-519749/3
Matrix: Water
Analysis Batch: 519749

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	289		ug/L		100	75 - 125
Ethylene	269	261		ug/L		97	75 - 125
Methane	154	153		ug/L		100	75 - 125

Lab Sample ID: LCS 680-519749/6
Matrix: Water
Analysis Batch: 519749

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	2110		ug/L		110	75 - 125

Lab Sample ID: LCSD 680-519749/4
Matrix: Water
Analysis Batch: 519749

Client Sample 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	328		ug/L		114	75 - 125	13	30
Ethylene	269	296		ug/L		110	75 - 125	13	30
Methane	154	174		ug/L		113	75 - 125	12	30

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

Lab Sample ID: LCSD 680-519749/7
Matrix: Water
Analysis Batch: 519749

Client Sample 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	2100		ug/L		109	75 - 125	1	30

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519749

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	8.6		288	266		ug/L		89	75 - 125
Ethylene	14		269	242		ug/L		85	75 - 125

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519749

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	8.6		288	282		ug/L		95	75 - 125	6	30
Ethylene	14		269	257		ug/L		90	75 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-519735/2
Matrix: Water
Analysis Batch: 519735

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		04/12/18 12:22	1

Lab Sample ID: LCS 680-519735/3
Matrix: Water
Analysis Batch: 519735

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	9.80		mg/L		98	87 - 112

Lab Sample ID: LCSD 680-519735/4
Matrix: Water
Analysis Batch: 519735

Client Sample 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	9.89		mg/L		99	87 - 112	1	15

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519735

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	4.5		10.0	15.5		mg/L		110	87 - 112

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

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519735

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	4.5		10.0	14.8		mg/L		103	87 - 112	5	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-519486/1-A
Matrix: Water
Analysis Batch: 519787

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519486

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		04/11/18 16:57	1
Manganese	3.0	U	10	3.0	1.0	ug/L		04/11/18 16:57	1

Lab Sample ID: LCS 680-519486/2-A
Matrix: Water
Analysis Batch: 519787

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519486

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5210		ug/L		104	87 - 115
Manganese	500	529		ug/L		106	90 - 114

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519787

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Dissolved
Prep Batch: 519486

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	34000	J1	5000	40700	4	ug/L		127	87 - 115
Manganese	7500	J1	500	8240	4	ug/L		151	90 - 114

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519787

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Dissolved
Prep Batch: 519486

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	34000	J1	5000	38300	4	ug/L		79	87 - 115	6	20
Manganese	7500	J1	500	7710	4	ug/L		46	90 - 114	7	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-519485/1-A
Matrix: Water
Analysis Batch: 519758

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 519485

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		04/11/18 12:01	1

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

Lab Sample ID: LCS 680-519485/2-A
Matrix: Water
Analysis Batch: 519758

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 519485

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			100	102		ug/L		102	84 - 116		

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519758

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Dissolved
Prep Batch: 519485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	350	J1	100	471	J1	ug/L		121	84 - 116		

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519758

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Dissolved
Prep Batch: 519485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	350	J1	100	433	J1	ug/L		83	84 - 116	8	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-411490/22
Matrix: Water
Analysis Batch: 411490

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		04/16/18 18:24	1

Lab Sample ID: LCS 280-411490/21
Matrix: Water
Analysis Batch: 411490

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	4.97		mg/L		99	90 - 110		

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 411490

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate/Nitrite-N	0.062	J1	4.00	3.04	J1	mg/L		75	90 - 110		

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 411490

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.062	J1	4.00	2.97	J1	mg/L		73	90 - 110	3	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-519222/1
Matrix: Water
Analysis Batch: 519222

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		04/09/18 05:52	1

Lab Sample ID: LCS 680-519222/2
Matrix: Water
Analysis Batch: 519222

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	9.12		mg/L		91	75 - 125

Lab Sample ID: LCSD 680-519222/3
Matrix: Water
Analysis Batch: 519222

Client Sample 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	9.17		mg/L		92	75 - 125	1	30

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 519222

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.0	U	10.0	9.18		mg/L		92	75 - 125

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 519222

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.0	U	10.0	9.28		mg/L		93	75 - 125	1	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-411580/35
Matrix: Water
Analysis Batch: 411580

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.185	J	1.0	0.50	0.16	mg/L		04/16/18 23:48	1

Lab Sample ID: MB 280-411580/4
Matrix: Water
Analysis Batch: 411580

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.430	J	1.0	0.50	0.16	mg/L		04/16/18 14:36	1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 280-411580/3
Matrix: Water
Analysis Batch: 411580

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	24.9		mg/L		100	88 - 112

Lab Sample ID: LCS 280-411580/34
Matrix: Water
Analysis Batch: 411580

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	24.7		mg/L		99	88 - 112

Lab Sample ID: 680-150815-1 MS
Matrix: Water
Analysis Batch: 411580

Client Sample ID: G6M-13-04X_SPR18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	1.8		25.0	26.7		mg/L		100	88 - 112

Lab Sample ID: 680-150815-1 MSD
Matrix: Water
Analysis Batch: 411580

Client Sample ID: G6M-13-04X_SPR18
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	1.8		25.0	27.0		mg/L		100	88 - 112	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-410981/31
Matrix: Water
Analysis Batch: 410981

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.2	U	5.0	3.2	1.1	mg/L		04/10/18 20:34	1

Lab Sample ID: MB 280-410981/5
Matrix: Water
Analysis Batch: 410981

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.2	U	5.0	3.2	1.1	mg/L		04/10/18 17:25	1

Lab Sample ID: LCS 280-410981/30
Matrix: Water
Analysis Batch: 410981

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	191		mg/L		96	90 - 110

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-410981/4
Matrix: Water
Analysis Batch: 410981

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	190		mg/L		95	90 - 110

GC/MS VOA

Analysis Batch: 519533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	8260B	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	8260B	
680-150815-3	Trip Blank1_040518	Total/NA	Water	8260B	
MB 680-519533/9	Method Blank	Total/NA	Water	8260B	
LCS 680-519533/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-519533/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	8260B	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 519749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	RSK-175	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	RSK-175	
MB 680-519749/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-519749/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-519749/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-519749/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-519749/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	RSK-175	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 519735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	9056A	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	9056A	
MB 680-519735/2	Method Blank	Total/NA	Water	9056A	
LCS 680-519735/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-519735/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	9056A	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	9056A	

Metals

Prep Batch: 519485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Dissolved	Water	3005A	
680-150815-2	G6M-13-05X_SPR18	Dissolved	Water	3005A	
MB 680-519485/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519485/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-150815-1 MS	G6M-13-04X_SPR18	Dissolved	Water	3005A	
680-150815-1 MSD	G6M-13-04X_SPR18	Dissolved	Water	3005A	

Prep Batch: 519486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Dissolved	Water	3005A	
680-150815-2	G6M-13-05X_SPR18	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 519486 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-519486/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-519486/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-150815-1 MS	G6M-13-04X_SPR18	Dissolved	Water	3005A	
680-150815-1 MSD	G6M-13-04X_SPR18	Dissolved	Water	3005A	

Analysis Batch: 519758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Dissolved	Water	6020A	519485
680-150815-2	G6M-13-05X_SPR18	Dissolved	Water	6020A	519485
MB 680-519485/1-A	Method Blank	Total Recoverable	Water	6020A	519485
LCS 680-519485/2-A	Lab Control Sample	Total Recoverable	Water	6020A	519485
680-150815-1 MS	G6M-13-04X_SPR18	Dissolved	Water	6020A	519485
680-150815-1 MSD	G6M-13-04X_SPR18	Dissolved	Water	6020A	519485

Analysis Batch: 519787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Dissolved	Water	6010C	519486
680-150815-2	G6M-13-05X_SPR18	Dissolved	Water	6010C	519486
MB 680-519486/1-A	Method Blank	Total Recoverable	Water	6010C	519486
LCS 680-519486/2-A	Lab Control Sample	Total Recoverable	Water	6010C	519486
680-150815-1 MS	G6M-13-04X_SPR18	Dissolved	Water	6010C	519486
680-150815-1 MSD	G6M-13-04X_SPR18	Dissolved	Water	6010C	519486

General Chemistry

Analysis Batch: 410981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	SM 2320B	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	SM 2320B	
MB 280-410981/31	Method Blank	Total/NA	Water	SM 2320B	
MB 280-410981/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-410981/30	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 280-410981/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 411490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	353.2	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	353.2	
MB 280-411490/22	Method Blank	Total/NA	Water	353.2	
LCS 280-411490/21	Lab Control Sample	Total/NA	Water	353.2	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	353.2	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	353.2	

Analysis Batch: 411580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	9060A	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	9060A	
MB 280-411580/35	Method Blank	Total/NA	Water	9060A	
MB 280-411580/4	Method Blank	Total/NA	Water	9060A	
LCS 280-411580/3	Lab Control Sample	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 411580 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-411580/34	Lab Control Sample	Total/NA	Water	9060A	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	9060A	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	9060A	

Analysis Batch: 519222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-150815-1	G6M-13-04X_SPR18	Total/NA	Water	9034	
680-150815-2	G6M-13-05X_SPR18	Total/NA	Water	9034	
MB 680-519222/1	Method Blank	Total/NA	Water	9034	
LCS 680-519222/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-519222/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-150815-1 MS	G6M-13-04X_SPR18	Total/NA	Water	9034	
680-150815-1 MSD	G6M-13-04X_SPR18	Total/NA	Water	9034	

Client Sample ID: G6M-13-04X_SPR18

Lab Sample ID: 680-150815-1

Date Collected: 04/05/18 09:05

Matrix: Water

Date Received: 04/07/18 09:42

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	519533	04/11/18 16:17	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519749	04/12/18 11:38	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	519735	04/12/18 18:55	CJM	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519486	04/10/18 15:41	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 17:07	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519485	04/10/18 15:38	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 12:08	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 18:26	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			411580	04/17/18 00:30	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410981	04/10/18 20:06	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-13-05X_SPR18

Lab Sample ID: 680-150815-2

Date Collected: 04/05/18 11:05

Matrix: Water

Date Received: 04/07/18 09:42

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	519533	04/11/18 12:30	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	519749	04/12/18 12:17	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	519735	04/12/18 19:34	CJM	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	519486	04/10/18 15:41	BCB	TAL SAV
Dissolved	Analysis	6010C		1			519787	04/11/18 17:44	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	519485	04/10/18 15:38	BCB	TAL SAV
Dissolved	Analysis	6020A		1			519758	04/11/18 12:25	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1			411490	04/16/18 18:32	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	519222	04/09/18 05:52	DAM	TAL SAV
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Client Sample ID: G6M-13-05X_SPR18

Lab Sample ID: 680-150815-2

Date Collected: 04/05/18 11:05

Matrix: Water

Date Received: 04/07/18 09:42

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		2.38			411580	04/16/18 16:24	A1D	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			410981	04/10/18 20:40	LPL	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: Trip Blank1_040518

Lab Sample ID: 680-150815-3

Date Collected: 04/05/18 00:00

Matrix: Water

Date Received: 04/07/18 09:42

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	519533	04/11/18 12:07	Y1S	TAL SAV
	Instrument ID: CMSB									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Chain of Custody Record

PO # 18-706 | Devens - AOC50 Spring 2018 1082-052 | Page: 1 of: 1

Company	KOMAN GS, LLC
Address:	293 Boston Post Road, Suite 100, Marlborough, MA 01752
Phone: 508-366-7442	Fax: 508-366-7445
Sampled by [Print Name(s)]/Affilliation	
Sampler(s) Signature(s)	

Laboratory:	Test America - Savannah
Address:	510 LaRoche Ave, Savannah, GA 31404
Contact:	Jerry Lanier
Regulatory Facility No.	
Project Name:	Devens Spring 2018 LTM
Sampling QAP No.:	
Approval Date:	
TAT	Routine
Other:	

Preservatives (see codes): H | H | I | S | O | I | S | N

Analyses Requested

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	VOCs/SW8260 3-40-ml VOA vials (HCl)	RSK175 3-40-ml VOA vials (HCl)	Sulfate-SW9056 1-125-ml poly	Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4)	Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH)	Alkalinity/SM2320B 1-250-ml poly	TOC/SW9060 1-500-ml amber glass (H2SO4)	**Dissolved Metals*-** SW6010/6020 1-250 ml poly (HNO3)	Remarks	Lab. No.
66M-13-04X-S18	4/5/18	905	P	GW	36	X	X	X	X	X	X	X	X	MS/MSD	
66M-13-05X-S18	4/5/18	1105	P	GW	12	X	X	X	X	X	X	X	X		
			P	GW											
			P	GW											
			P	GW											
			P	GW											
TripBlank		4/5/18	O	O	2	X									

680-150815 Chain of Custody

Shipping Details: courier pick up — 2 ← Total Number of Containers

Date Out:	Via:	Item No.	Relinquished by/Affiliation	Date	Time		Accepted by/Affiliation	Date	Time
Returned:	Via:			4/6/18	1350	4-6-18			1350
Additional Comments:				4-6-18	1041				
* = Dissolved Metals include: Fe, Mn (6010); As (6020)									
						4/7/18			942

email logins and results to: lekes@komangs.com

Lab Comments

Preserve Where Applicable ☐ On ICE ☐

Temperature _____ C

☐ NJ Reduced
☐ NJ Full
☐ Full CLP
☐ Disk Deliverable
☐ Other (Specify)

1.2°C (#) 1.3°C

MATRIX CODES: A = Air | GW = Groundwat | SE = Sediment | SP = Soil | SW = Surface Water | W = Water (Blanks) | O = Other

PRESERVATIVE CODES: H = HCL + Ice | I = Ice Only | N = Nitric Acid + Ice | S = Sulfuric Acid + Ice | M = Methanol | O = Other

COLLECTION METHOD CODE: C = Composite | G=Grab | P= Pumping | O = Other

PO #	18-706	Devens - AOC50 Spring 2018 1082-052	**Chain of Custody Record**	Page: 1 of: 1

Company	KOMAN GS, LLC		Laboratory: Test America - Savannah
Address:	293 Boston Post Road, Suite 100 Marlborough, MA 01752		Address: 510 LaRoche Ave Savannah, GA 31404
Phone:	508-366-7442	Fax: 508-366-7445	Contact: Jerry Lanier
Sampled by [Print Name(s)]/Affilliation	[illegible]		Regulatory Facility No.
Sampler(s) Signature(s)	[illegible]		Project Name: Devens Spring 2018 LTM
			Sampling QAP No.:
			Approval Date:
			TAT Routine
			Other:

Preservatives (see codes): H, H, I, S, O, I, S, N

Analyses Requested

Field ID No.	Sampled Date	Sampled Time	Col. Method (see codes)	Matrix (see codes)	Number of Containers	VOCs/SW8260 3-40-ml VOA vials (HCl)	RSK175 3-40-ml VOA vials (HCl)	Sulfate-SW9056 1-125-ml poly	Nitrate/Nitrite-E353.2 1-500 ml amber glass (H2SO4)	Sulfide-SW9034 2-250ml poly (Zn acetate&NaOH)	Alkalinity/SM2320B 1-250-ml poly	TOC/SW9060 1-500-ml amber glass (H2SO4)	**Dissolved Metals*-** SW6010/6020 1-250 ml poly (HNO3)			Remarks	Lab. No.
66M-13-04X-SPR18	4/5/18	905	P	GW	36	X	X	X	X	X	X	X	X			MS/MSD	
66M-13-05X-SPR18	4/5/18	1105	P	GW	12	X	X	X	X	X	X	X	X				
			P	GW													
			P	GW													
			P	GW													
			P	GW													
TripBlank	4/5/18	-	O	O	2	X											
Shipping Details			courier pick up		~~2~~	← Total Number of Containers											

Date Out:	Via:	Item No.	Relinquished by/Affiliation	Date	Time		Accepted by/Affiliation	Date	Time
Returned:	Via:		[illegible] 4/6/18	4/6/18	1350	4-6-18	[illegible]		1350
Additional Comments:			[illegible]	4-6-18	1040	Rec'd	[illegible] 4-7-18		0845
* = Dissolved Metals include: Fe, Mn (6010); As (6020)									

email logins and results to:

680-150815 Chain of Custody

Lab Comments

Preserve Where Applicable ☐

On ICE ☐

Temperature _____C

☐ NJ Reduced

☐ NJ Full

☐ Full CLP

☐ Disk Deliverable

☐ Other (Specify)

0.2 IR#8-0.1 Transfer

RP 4-7-18

MATRIX CODES: A = Air	GW = Groundwate	SE = Sediment	SP = Soil	SW = Surface Water	W = Water (Blanks)	O = Other
PRESERVATIVE CODES:	H = HCL + Ice	I = Ice Only	N = Nitric Acid + Ice	S = Sulfuric Acid + Ice	M = Methanol	O = Other
COLLECTION METHOD CODE	C = Composite	G=Grab	P= Pumping			O = Other

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-150815-1

Login Number: 150815

List Source: TestAmerica Savannah

List Number: 1

Creator: Ragnaldsen, Amy E

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.	N/A	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-18
Alaska	State Program	10		06-30-18
Alaska (UST)	State Program	10	UST-104	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-18
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-18
GA Dept. of Agriculture	State Program	4	N/A	06-12-18
Georgia	State Program	4	803	06-30-18
Guam	State Program	9	15-005r	04-16-18
Hawaii	State Program	9	N/A	06-30-18
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-18
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-18
Kentucky (WW)	State Program	4	90084	12-31-18 *
L-A-B	DoD ELAP		L2463	09-22-19
L-A-B	ISO/IEC 17025		L2463.01	09-22-19
Louisiana	NELAP	6	30690	06-30-18
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-24-18
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-18
Michigan	State Program	5	9925	06-30-18
Mississippi	State Program	4	N/A	06-30-18
Nebraska	State Program	7	TestAmerica-Savannah	06-30-18
New Jersey	NELAP	2	GA769	06-30-18
New Mexico	State Program	6	N/A	06-30-18
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-18
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-18
Pennsylvania	NELAP	3	68-00474	06-30-18
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18
Tennessee	State Program	4	TN02961	06-30-18
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas	State Program	6	T104704185	06-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		P330-17-00213	06-14-20 *
Virginia	NELAP	3	460161	06-14-18
Washington	State Program	10	C805	06-10-18
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-18
Wisconsin	State Program	5	999819810	08-31-18
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50 Spring 2018

TestAmerica Job ID: 680-150815-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

B.2

Fall 2018 LTM Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-159359-1
Client Project/Site: Fort Devens / LTM / AOC 50

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
10/31/2018 6:21:15 PM

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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.

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Job ID: 680-159359-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / LTM / AOC 50

Report Number: 680-159359-1

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 10/18/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.9º C and 1.0º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3), G6M-04-10X_FAL18 (680-159359-4), G6M-TB01 (680-159359-5), G6M-13-05X_FAL18 (680-159359-6), G6M-95-19X_FAL18 (680-159359-7), G6M-95-20X_FAL18 (680-159359-8) and G6M-TB02 (680-159359-9) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/25/2018, 10/26/2018 and 10/29/2018.

The continuing calibration verification (CCV) associated with batch 680-544987 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 680-545027 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 laboratory control sample (LCS) for analytical batch 680-544987 recovered outside control limits for the following analytes: Bromomethane. The analyte was biased high in the LCS but not detected in the associated samples; therefore, the data has been reported.

The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-545027 recovered outside control limits for the following analyte(s): Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-545027 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-545027 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

The matrix spike duplicate (MSD) recoveries for analytical batch 680-545250 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Job ID: 680-159359-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-545250 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples G6M-07-02X_FAL18 (680-159359-1)[5X], AOC50-DUP03_FAL18 (680-159359-2)[5X] and G6M-13-05X_FAL18 (680-159359-6) [5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-544987.

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

DISSOLVED GASES

Samples G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/24/2018 and 10/29/2018.

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

METALS (ICP) - DISSOLVED

Samples G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3), G6M-13-05X_FAL18 (680-159359-6) and G6M-95-20X_FAL18 (680-159359-8) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/23/2018 and 10/24/2018 and analyzed on 10/25/2018.

The instrument blank for analytical batch 680-544751 contained Manganese greater than one-half the reporting limit (RL), and were not re-analyzed because results were greater than 10X the value found in the instrument blank. The data have been qualified and reported.

Iron and Manganese failed the recovery criteria low for the MS/MSD of sample G6M-04-10A_FAL18 (680-159359-3) in batch 680-545052.

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 G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3), G6M-13-05X_FAL18 (680-159359-6) and G6M-95-20X_FAL18 (680-159359-8) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/23/2018 and 10/24/2018 and analyzed on 10/24/2018.

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

ALKALINITY

Samples G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/19/2018.

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

NITRATE-NITRITE AS NITROGEN

Samples G6M-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were

Job ID: 680-159359-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

analyzed on 10/22/2018.

Nitrate/Nitrite-N was detected in method blank MB 280-434438/22 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. Refer to the QC report for details.

Nitrate/Nitrite-N failed the recovery criteria low for the MS/MSD of sample G6M-04-10A_FAL18 (680-159359-3) in batch 280-434438.

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-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/22/2018.

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-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 10/30/2018.

Samples G6M-07-02X_FAL18 (680-159359-1)[10X], AOC50-DUP03_FAL18 (680-159359-2)[10X], G6M-04-10A_FAL18 (680-159359-3) [10X] and G6M-13-05X_FAL18 (680-159359-6)[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-07-02X_FAL18 (680-159359-1), AOC50-DUP03_FAL18 (680-159359-2), G6M-04-10A_FAL18 (680-159359-3) and G6M-13-05X_FAL18 (680-159359-6) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/19/2018 and 10/24/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-434876/4 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.

Samples G6M-07-02X_FAL18 (680-159359-1)[35X], AOC50-DUP03_FAL18 (680-159359-2)[35X], G6M-04-10A_FAL18 (680-159359-3) [100X] and G6M-13-05X_FAL18 (680-159359-6)[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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159359-1	G6M-07-02X_FAL18	Water	10/17/18 10:45	10/18/18 09:25
680-159359-2	AOC50-DUP03_FAL18	Water	10/17/18 10:55	10/18/18 09:25
680-159359-3	G6M-04-10A_FAL18	Water	10/16/18 12:15	10/18/18 09:25
680-159359-4	G6M-04-10X_FAL18	Water	10/17/18 12:20	10/18/18 09:25
680-159359-5	G6M-TB01	Water	10/16/18 00:00	10/18/18 09:25
680-159359-6	G6M-13-05X_FAL18	Water	10/16/18 09:30	10/18/18 09:25
680-159359-7	G6M-95-19X_FAL18	Water	10/17/18 08:20	10/18/18 09:25
680-159359-8	G6M-95-20X_FAL18	Water	10/17/18 09:20	10/18/18 09:25
680-159359-9	G6M-TB02	Water	10/17/18 00:00	10/18/18 09:25

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

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
D	The reported value is from a dilution.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.

Metals

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

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J1	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

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)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

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)

Client Sample ID: G6M-07-02X_FAL18
Date Collected: 10/17/18 10:45
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
1,1,1-Trichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	3.1	ug/L		10/26/18 15:07	5
1,1,2-Trichloroethane	2.5	U M	5.0	2.5	1.7	ug/L		10/26/18 15:07	5
1,1-Dichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
1,1-Dichloroethene	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:07	5
1,1-Dichloropropene	5.0	U	5.0	5.0	1.7	ug/L		10/26/18 15:07	5
1,2,3-Trichlorobenzene	25	U	25	25	13	ug/L		10/26/18 15:07	5
1,2,3-Trichloropropane	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:07	5
1,2,4-Trichlorobenzene	25	U	25	25	13	ug/L		10/26/18 15:07	5
1,2,4-Trimethylbenzene	**2.5**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:07	5
1,2-Dibromo-3-Chloropropane	10	U	25	10	5.5	ug/L		10/26/18 15:07	5
1,2-Dichlorobenzene	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
1,2-Dichloroethane	5.0	U M	5.0	5.0	2.5	ug/L		10/26/18 15:07	5
1,2-Dichloroethene, Total	**110**	**D**	10	5.0	3.7	ug/L		10/26/18 15:07	5
1,2-Dichloropropane	5.0	U	5.0	5.0	3.4	ug/L		10/26/18 15:07	5
1,3,5-Trimethylbenzene	2.5	U M	5.0	2.5	1.6	ug/L		10/26/18 15:07	5
1,3-Dichlorobenzene	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:07	5
1,3-Dichloropropane	5.0	U	5.0	5.0	1.7	ug/L		10/26/18 15:07	5
1,4-Dichlorobenzene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:07	5
2,2-Dichloropropane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
2-Butanone (MEK)	**98**	**D**	50	50	17	ug/L		10/26/18 15:07	5
2-Chlorotoluene	2.5	U	5.0	2.5	1.4	ug/L		10/26/18 15:07	5
2-Hexanone	25	U M	50	25	10	ug/L		10/26/18 15:07	5
4-Chlorotoluene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:07	5
4-Isopropyltoluene	5.0	U	5.0	5.0	2.4	ug/L		10/26/18 15:07	5
4-Methyl-2-pentanone (MIBK)	25	U	50	25	11	ug/L		10/26/18 15:07	5
Acetone	**77**	**D**	50	50	35	ug/L		10/26/18 15:07	5
Benzene	5.0	U M	5.0	5.0	2.2	ug/L		10/26/18 15:07	5
Bromobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 15:07	5
Bromoform	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:07	5
Bromomethane	25	U Q	25	25	13	ug/L		10/26/18 15:07	5
Carbon disulfide	10	U	10	10	2.2	ug/L		10/26/18 15:07	5
Carbon tetrachloride	2.5	U	5.0	2.5	1.7	ug/L		10/26/18 15:07	5
Chlorobenzene	2.5	U	5.0	2.5	1.3	ug/L		10/26/18 15:07	5
Chlorobromomethane	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:07	5
Chlorodibromomethane	2.5	U	5.0	2.5	1.6	ug/L		10/26/18 15:07	5
Chloroethane	25	U	25	25	13	ug/L		10/26/18 15:07	5
Chloroform	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 15:07	5
Chloromethane	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:07	5
cis-1,2-Dichloroethene	**110**	**D**	5.0	5.0	2.1	ug/L		10/26/18 15:07	5
cis-1,3-Dichloropropene	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:07	5
Dibromomethane	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:07	5
Dichlorobromomethane	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:07	5
Dichlorodifluoromethane	5.0	U	5.0	5.0	3.0	ug/L		10/26/18 15:07	5
Ethylbenzene	2.5	U	5.0	2.5	1.7	ug/L		10/26/18 15:07	5
Ethylene Dibromide	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:07	5
Hexachlorobutadiene	25	U	25	25	13	ug/L		10/26/18 15:07	5
Isopropylbenzene	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:07	5

Client Sample ID: G6M-07-02X_FAL18
Date Collected: 10/17/18 10:45
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.5	U	50	2.5	1.5	ug/L		10/26/18 15:07	5
Methylene Chloride	25	U	25	25	13	ug/L		10/26/18 15:07	5
m-Xylene & p-Xylene	5.0	U M	5.0	5.0	1.8	ug/L		10/26/18 15:07	5
Naphthalene	25	U	25	25	13	ug/L		10/26/18 15:07	5
n-Butylbenzene	**2.6**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:07	5
N-Propylbenzene	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
o-Xylene	2.5	U	5.0	2.5	1.2	ug/L		10/26/18 15:07	5
sec-Butylbenzene	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:07	5
Styrene	2.5	U	5.0	2.5	1.4	ug/L		10/26/18 15:07	5
tert-Butylbenzene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:07	5
Tetrachloroethene	**370**	**D**	5.0	5.0	3.7	ug/L		10/26/18 15:07	5
Toluene	5.0	U M	5.0	5.0	2.4	ug/L		10/26/18 15:07	5
trans-1,2-Dichloroethene	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:07	5
trans-1,3-Dichloropropene	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:07	5
Trichloroethene	**4.1**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:07	5
Trichlorofluoromethane	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:07	5
Vinyl acetate	10	U M	10	10	4.1	ug/L		10/26/18 15:07	5
Vinyl chloride	**3.3**	**J D**	5.0	5.0	2.5	ug/L		10/26/18 15:07	5
Xylenes, Total	2.5	U	10	2.5	1.2	ug/L		10/26/18 15:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*10/26/18 15:07*	*5*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/26/18 15:07*	*5*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*10/26/18 15:07*	*5*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/26/18 15:07*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**14**		1.1	1.1	0.55	ug/L		10/29/18 19:03	1
Ethylene	**43**		1.0	1.0	0.50	ug/L		10/29/18 19:03	1
Methane (TCD)	**25000**		390	77	39	ug/L		10/29/18 19:03	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.6**	**J D**	10	10	4.0	mg/L		10/30/18 20:59	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**370000**		50	50	17	ug/L		10/25/18 18:15	1
Manganese	**6100**		10	3.0	1.0	ug/L		10/25/18 18:15	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**69**		3.0	3.0	1.5	ug/L		10/24/18 16:33	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.43**		0.10	0.050	0.019	mg/L		10/22/18 18:48	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 07:34	1
Total Organic Carbon - Duplicates	**1300**		35	18	5.4	mg/L		10/19/18 13:05	35
Alkalinity	**400**		5.0	5.0	1.1	mg/L		10/19/18 18:47	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: AOC50-DUP03_FAL18
Date Collected: 10/17/18 10:55
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
1,1,1-Trichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	3.1	ug/L		10/26/18 15:29	5
1,1,2-Trichloroethane	2.5	U M	5.0	2.5	1.7	ug/L		10/26/18 15:29	5
1,1-Dichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
1,1-Dichloroethene	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:29	5
1,1-Dichloropropene	5.0	U	5.0	5.0	1.7	ug/L		10/26/18 15:29	5
1,2,3-Trichlorobenzene	25	U	25	25	13	ug/L		10/26/18 15:29	5
1,2,3-Trichloropropane	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:29	5
1,2,4-Trichlorobenzene	25	U	25	25	13	ug/L		10/26/18 15:29	5
1,2,4-Trimethylbenzene	**2.9**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:29	5
1,2-Dibromo-3-Chloropropane	10	U	25	10	5.5	ug/L		10/26/18 15:29	5
1,2-Dichlorobenzene	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
1,2-Dichloroethane	5.0	U M	5.0	5.0	2.5	ug/L		10/26/18 15:29	5
1,2-Dichloroethene, Total	**110**	**D**	10	5.0	3.7	ug/L		10/26/18 15:29	5
1,2-Dichloropropane	5.0	U	5.0	5.0	3.4	ug/L		10/26/18 15:29	5
1,3,5-Trimethylbenzene	2.5	U	5.0	2.5	1.6	ug/L		10/26/18 15:29	5
1,3-Dichlorobenzene	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:29	5
1,3-Dichloropropane	5.0	U	5.0	5.0	1.7	ug/L		10/26/18 15:29	5
1,4-Dichlorobenzene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:29	5
2,2-Dichloropropane	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
2-Butanone (MEK)	**110**	**D**	50	50	17	ug/L		10/26/18 15:29	5
2-Chlorotoluene	2.5	U	5.0	2.5	1.4	ug/L		10/26/18 15:29	5
2-Hexanone	25	U M	50	25	10	ug/L		10/26/18 15:29	5
4-Chlorotoluene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:29	5
4-Isopropyltoluene	5.0	U	5.0	5.0	2.4	ug/L		10/26/18 15:29	5
4-Methyl-2-pentanone (MIBK)	25	U	50	25	11	ug/L		10/26/18 15:29	5
Acetone	**95**	**D**	50	50	35	ug/L		10/26/18 15:29	5
Benzene	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:29	5
Bromobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 15:29	5
Bromoform	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:29	5
Bromomethane	25	U Q	25	25	13	ug/L		10/26/18 15:29	5
Carbon disulfide	10	U	10	10	2.2	ug/L		10/26/18 15:29	5
Carbon tetrachloride	2.5	U	5.0	2.5	1.7	ug/L		10/26/18 15:29	5
Chlorobenzene	2.5	U	5.0	2.5	1.3	ug/L		10/26/18 15:29	5
Chlorobromomethane	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:29	5
Chlorodibromomethane	2.5	U	5.0	2.5	1.6	ug/L		10/26/18 15:29	5
Chloroethane	25	U	25	25	13	ug/L		10/26/18 15:29	5
Chloroform	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 15:29	5
Chloromethane	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:29	5
cis-1,2-Dichloroethene	**110**	**D**	5.0	5.0	2.1	ug/L		10/26/18 15:29	5
cis-1,3-Dichloropropene	5.0	U	5.0	5.0	2.0	ug/L		10/26/18 15:29	5
Dibromomethane	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:29	5
Dichlorobromomethane	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:29	5
Dichlorodifluoromethane	5.0	U M	5.0	5.0	3.0	ug/L		10/26/18 15:29	5
Ethylbenzene	2.5	U M	5.0	2.5	1.7	ug/L		10/26/18 15:29	5
Ethylene Dibromide	5.0	U	5.0	5.0	2.2	ug/L		10/26/18 15:29	5
Hexachlorobutadiene	25	U	25	25	13	ug/L		10/26/18 15:29	5
Isopropylbenzene	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:29	5

Client Sample ID: AOC50-DUP03_FAL18

Date Collected: 10/17/18 10:55
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	2.5	U	50	2.5	1.5	ug/L		10/26/18 15:29	5
Methylene Chloride	25	U	25	25	13	ug/L		10/26/18 15:29	5
m-Xylene & p-Xylene	5.0	U	5.0	5.0	1.8	ug/L		10/26/18 15:29	5
Naphthalene	25	U	25	25	13	ug/L		10/26/18 15:29	5
n-Butylbenzene	**3.5**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:29	5
N-Propylbenzene	5.0	U M	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
o-Xylene	2.5	U	5.0	2.5	1.2	ug/L		10/26/18 15:29	5
sec-Butylbenzene	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:29	5
Styrene	2.5	U	5.0	2.5	1.4	ug/L		10/26/18 15:29	5
tert-Butylbenzene	5.0	U	5.0	5.0	2.3	ug/L		10/26/18 15:29	5
Tetrachloroethene	**430**	**D**	5.0	5.0	3.7	ug/L		10/26/18 15:29	5
Toluene	5.0	U	5.0	5.0	2.4	ug/L		10/26/18 15:29	5
trans-1,2-Dichloroethene	5.0	U	5.0	5.0	1.9	ug/L		10/26/18 15:29	5
trans-1,3-Dichloropropene	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:29	5
Trichloroethene	**4.3**	**J D**	5.0	5.0	2.4	ug/L		10/26/18 15:29	5
Trichlorofluoromethane	5.0	U	5.0	5.0	2.1	ug/L		10/26/18 15:29	5
Vinyl acetate	10	U M	10	10	4.1	ug/L		10/26/18 15:29	5
Vinyl chloride	**4.2**	**J D**	5.0	5.0	2.5	ug/L		10/26/18 15:29	5
Xylenes, Total	2.5	U	10	2.5	1.2	ug/L		10/26/18 15:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*81 - 118*		*10/26/18 15:29*	*5*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*10/26/18 15:29*	*5*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/26/18 15:29*	*5*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/26/18 15:29*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**12**		1.1	1.1	0.55	ug/L		10/29/18 19:16	1
Ethylene	**39**		1.0	1.0	0.50	ug/L		10/29/18 19:16	1
Methane (TCD)	**20000**		390	77	39	ug/L		10/29/18 19:16	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	10	U	10	10	4.0	mg/L		10/30/18 21:12	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**390000**		50	50	17	ug/L		10/25/18 18:20	1
Manganese	**6400**		10	3.0	1.0	ug/L		10/25/18 18:20	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**71**		3.0	3.0	1.5	ug/L		10/24/18 16:37	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.85**		0.10	0.050	0.019	mg/L		10/22/18 18:50	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 07:34	1
Total Organic Carbon - Duplicates	**1300**		35	18	5.4	mg/L		10/19/18 13:30	35
Alkalinity	**400**		5.0	5.0	1.1	mg/L		10/19/18 19:25	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-04-10A_FAL18
Date Collected: 10/16/18 12:15
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 16:12	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 16:12	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/26/18 16:12	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 16:12	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 16:12	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/26/18 16:12	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 16:12	1
1,2,3-Trichlorobenzene	5.0	U J1	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/26/18 16:12	1
1,2,4-Trichlorobenzene	5.0	U J1	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
1,2,4-Trimethylbenzene	1.0	U J1	1.0	1.0	0.47	ug/L		10/26/18 16:12	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/26/18 16:12	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 16:12	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/26/18 16:12	1
1,2-Dichloroethene, Total	**1.9**	**J**	2.0	1.0	0.74	ug/L		10/26/18 16:12	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/26/18 16:12	1
1,3,5-Trimethylbenzene	0.50	U M	1.0	0.50	0.31	ug/L		10/26/18 16:12	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 16:12	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 16:12	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/26/18 16:12	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 16:12	1
2-Butanone (MEK)	**13**		10	10	3.4	ug/L		10/26/18 16:12	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 16:12	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/26/18 16:12	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 16:12	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 16:12	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/26/18 16:12	1
Acetone	**8.5**	**J**	10	10	7.0	ug/L		10/26/18 16:12	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 16:12	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 16:12	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 16:12	1
Bromomethane	5.0	U Q J1	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/26/18 16:12	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 16:12	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/26/18 16:12	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 16:12	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/26/18 16:12	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 16:12	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 16:12	1
cis-1,2-Dichloroethene	**1.9**		1.0	1.0	0.41	ug/L		10/26/18 16:12	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 16:12	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 16:12	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 16:12	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/26/18 16:12	1
Ethylbenzene	0.50	U M	1.0	0.50	0.33	ug/L		10/26/18 16:12	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 16:12	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 16:12	1

Client Sample ID: G6M-04-10A_FAL18

Date Collected: 10/16/18 12:15
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-3

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/26/18 16:12	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 16:12	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 16:12	1
n-Butylbenzene	1.0	U J1	1.0	1.0	0.47	ug/L		10/26/18 16:12	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 16:12	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/26/18 16:12	1
sec-Butylbenzene	1.0	U J1	1.0	1.0	0.42	ug/L		10/26/18 16:12	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 16:12	1
tert-Butylbenzene	1.0	U J1	1.0	1.0	0.45	ug/L		10/26/18 16:12	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/26/18 16:12	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 16:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 16:12	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 16:12	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 16:12	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 16:12	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/26/18 16:12	1
Vinyl chloride	**1.2**		1.0	1.0	0.50	ug/L		10/26/18 16:12	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/26/18 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*10/26/18 16:12*	*1*
4-Bromofluorobenzene (Surr)	*111*		*85 - 114*		*10/26/18 16:12*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/18 16:12*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*10/26/18 16:12*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**0.99**	**J**	1.1	1.1	0.55	ug/L		10/24/18 14:47	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/24/18 14:47	1
Methane (TCD)	**32000**		390	77	39	ug/L		10/24/18 14:47	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.5**	**J D**	10	10	4.0	mg/L		10/30/18 21:25	10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**140000**	**J1**	50	50	17	ug/L		10/25/18 16:50	1
Manganese	**6100**	**J1**	10	3.0	1.0	ug/L		10/25/18 16:50	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**230**		3.0	3.0	1.5	ug/L		10/24/18 13:23	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.15**	**J1**	0.10	0.050	0.019	mg/L		10/22/18 18:42	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 07:34	1
Total Organic Carbon - Duplicates	**240**		100	50	16	mg/L		10/24/18 12:06	100
Alkalinity	**210**		5.0	5.0	1.1	mg/L		10/19/18 19:15	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-04-10X_FAL18
Date Collected: 10/17/18 12:20
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:13	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/26/18 01:13	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:13	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:13	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/26/18 01:13	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:13	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/26/18 01:13	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:13	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/26/18 01:13	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:13	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/26/18 01:13	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/26/18 01:13	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/26/18 01:13	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/26/18 01:13	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:13	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:13	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/26/18 01:13	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:13	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/26/18 01:13	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:13	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/26/18 01:13	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:13	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:13	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/26/18 01:13	1
Acetone	10	U	10	10	7.0	ug/L		10/26/18 01:13	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/26/18 01:13	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:13	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:13	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/26/18 01:13	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:13	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/26/18 01:13	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:13	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/26/18 01:13	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:13	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/26/18 01:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:13	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:13	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:13	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/26/18 01:13	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:13	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:13	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:13	1

Client Sample ID: G6M-04-10X_FAL18

Lab Sample ID: 680-159359-4

Date Collected: 10/17/18 12:20

Matrix: Water

Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/26/18 01:13	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:13	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:13	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:13	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:13	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/26/18 01:13	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:13	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:13	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:13	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/26/18 01:13	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:13	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:13	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:13	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/26/18 01:13	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:13	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/26/18 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*10/26/18 01:13*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/26/18 01:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/26/18 01:13*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/26/18 01:13*	*1*

Client Sample ID: G6M-TB01

Lab Sample ID: 680-159359-5

Date Collected: 10/16/18 00:00

Matrix: Water

Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 23:03	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 23:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/25/18 23:03	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 23:03	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 23:03	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/25/18 23:03	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 23:03	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/25/18 23:03	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 23:03	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/25/18 23:03	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 23:03	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/25/18 23:03	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/25/18 23:03	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/25/18 23:03	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/25/18 23:03	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 23:03	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-TB01
Date Collected: 10/16/18 00:00
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 23:03	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/25/18 23:03	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 23:03	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/25/18 23:03	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 23:03	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/25/18 23:03	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 23:03	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 23:03	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/25/18 23:03	1
Acetone	10	U	10	10	7.0	ug/L		10/25/18 23:03	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/25/18 23:03	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 23:03	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 23:03	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/25/18 23:03	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 23:03	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/25/18 23:03	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 23:03	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/25/18 23:03	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 23:03	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 23:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/25/18 23:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 23:03	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 23:03	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 23:03	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/25/18 23:03	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 23:03	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 23:03	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 23:03	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/25/18 23:03	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 23:03	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 23:03	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 23:03	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 23:03	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/25/18 23:03	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 23:03	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 23:03	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 23:03	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/25/18 23:03	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 23:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 23:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 23:03	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 23:03	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 23:03	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/25/18 23:03	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 23:03	1

Client Sample ID: G6M-TB01

Lab Sample ID: 680-159359-5

Date Collected: 10/16/18 00:00

Matrix: Water

Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/25/18 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/25/18 23:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/25/18 23:03*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*10/25/18 23:03*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/25/18 23:03*	*1*

Client Sample ID: G6M-13-05X_FAL18

Lab Sample ID: 680-159359-6

Date Collected: 10/16/18 09:30

Matrix: Water

Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
1,1,1-Trichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	5.0	3.1	ug/L		10/29/18 16:37	5
1,1,2-Trichloroethane	2.5	U	5.0	2.5	1.7	ug/L		10/29/18 16:37	5
1,1-Dichloroethane	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
1,1-Dichloroethene	5.0	U	5.0	5.0	1.8	ug/L		10/29/18 16:37	5
1,1-Dichloropropene	5.0	U	5.0	5.0	1.7	ug/L		10/29/18 16:37	5
1,2,3-Trichlorobenzene	25	U	25	25	13	ug/L		10/29/18 16:37	5
1,2,3-Trichloropropane	5.0	U	5.0	5.0	2.0	ug/L		10/29/18 16:37	5
1,2,4-Trichlorobenzene	25	U	25	25	13	ug/L		10/29/18 16:37	5
1,2,4-Trimethylbenzene	5.0	U M	5.0	5.0	2.4	ug/L		10/29/18 16:37	5
1,2-Dibromo-3-Chloropropane	10	U	25	10	5.5	ug/L		10/29/18 16:37	5
1,2-Dichlorobenzene	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
1,2-Dichloroethane	5.0	U M	5.0	5.0	2.5	ug/L		10/29/18 16:37	5
1,2-Dichloroethene, Total	**250**	**D**	10	5.0	3.7	ug/L		10/29/18 16:37	5
1,2-Dichloropropane	5.0	U	5.0	5.0	3.4	ug/L		10/29/18 16:37	5
1,3,5-Trimethylbenzene	2.5	U M	5.0	2.5	1.6	ug/L		10/29/18 16:37	5
1,3-Dichlorobenzene	5.0	U	5.0	5.0	2.2	ug/L		10/29/18 16:37	5
1,3-Dichloropropane	5.0	U	5.0	5.0	1.7	ug/L		10/29/18 16:37	5
1,4-Dichlorobenzene	5.0	U	5.0	5.0	2.3	ug/L		10/29/18 16:37	5
2,2-Dichloropropane	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
2-Butanone (MEK)	**200**	**D**	50	50	17	ug/L		10/29/18 16:37	5
2-Chlorotoluene	2.5	U	5.0	2.5	1.4	ug/L		10/29/18 16:37	5
2-Hexanone	25	U	50	25	10	ug/L		10/29/18 16:37	5
4-Chlorotoluene	5.0	U	5.0	5.0	2.3	ug/L		10/29/18 16:37	5
4-Isopropyltoluene	5.0	U	5.0	5.0	2.4	ug/L		10/29/18 16:37	5
4-Methyl-2-pentanone (MIBK)	25	U	50	25	11	ug/L		10/29/18 16:37	5
Acetone	50	U	50	50	35	ug/L		10/29/18 16:37	5
Benzene	5.0	U M	5.0	5.0	2.2	ug/L		10/29/18 16:37	5
Bromobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 16:37	5
Bromoform	5.0	U	5.0	5.0	2.2	ug/L		10/29/18 16:37	5
Bromomethane	25	U	25	25	13	ug/L		10/29/18 16:37	5
Carbon disulfide	10	U	10	10	2.2	ug/L		10/29/18 16:37	5
Carbon tetrachloride	2.5	U	5.0	2.5	1.7	ug/L		10/29/18 16:37	5
Chlorobenzene	2.5	U	5.0	2.5	1.3	ug/L		10/29/18 16:37	5
Chlorobromomethane	5.0	U	5.0	5.0	2.3	ug/L		10/29/18 16:37	5

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-13-05X_FAL18
Date Collected: 10/16/18 09:30
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorodibromomethane	2.5	U	5.0	2.5	1.6	ug/L		10/29/18 16:37	5
Chloroethane	25	U	25	25	13	ug/L		10/29/18 16:37	5
Chloroform	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 16:37	5
Chloromethane	5.0	U	5.0	5.0	2.0	ug/L		10/29/18 16:37	5
cis-1,2-Dichloroethene	**250**	**D**	5.0	5.0	2.1	ug/L		10/29/18 16:37	5
cis-1,3-Dichloropropene	5.0	U	5.0	5.0	2.0	ug/L		10/29/18 16:37	5
Dibromomethane	5.0	U	5.0	5.0	1.8	ug/L		10/29/18 16:37	5
Dichlorobromomethane	5.0	U	5.0	5.0	2.2	ug/L		10/29/18 16:37	5
Dichlorodifluoromethane	5.0	U	5.0	5.0	3.0	ug/L		10/29/18 16:37	5
Ethylbenzene	2.5	U M	5.0	2.5	1.7	ug/L		10/29/18 16:37	5
Ethylene Dibromide	5.0	U	5.0	5.0	2.2	ug/L		10/29/18 16:37	5
Hexachlorobutadiene	25	U	25	25	13	ug/L		10/29/18 16:37	5
Isopropylbenzene	5.0	U	5.0	5.0	1.8	ug/L		10/29/18 16:37	5
Methyl tert-butyl ether	2.5	U	50	2.5	1.5	ug/L		10/29/18 16:37	5
Methylene Chloride	25	U	25	25	13	ug/L		10/29/18 16:37	5
m-Xylene & p-Xylene	5.0	U	5.0	5.0	1.8	ug/L		10/29/18 16:37	5
Naphthalene	25	U	25	25	13	ug/L		10/29/18 16:37	5
n-Butylbenzene	5.0	U	5.0	5.0	2.4	ug/L		10/29/18 16:37	5
N-Propylbenzene	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
o-Xylene	2.5	U	5.0	2.5	1.2	ug/L		10/29/18 16:37	5
sec-Butylbenzene	5.0	U	5.0	5.0	2.1	ug/L		10/29/18 16:37	5
Styrene	2.5	U	5.0	2.5	1.4	ug/L		10/29/18 16:37	5
tert-Butylbenzene	5.0	U	5.0	5.0	2.3	ug/L		10/29/18 16:37	5
Tetrachloroethene	5.0	U	5.0	5.0	3.7	ug/L		10/29/18 16:37	5
Toluene	5.0	U	5.0	5.0	2.4	ug/L		10/29/18 16:37	5
trans-1,2-Dichloroethene	5.0	U	5.0	5.0	1.9	ug/L		10/29/18 16:37	5
trans-1,3-Dichloropropene	5.0	U	5.0	5.0	2.1	ug/L		10/29/18 16:37	5
Trichloroethene	**2.7**	**J D**	5.0	5.0	2.4	ug/L		10/29/18 16:37	5
Trichlorofluoromethane	5.0	U	5.0	5.0	2.1	ug/L		10/29/18 16:37	5
Vinyl acetate	10	U	10	10	4.1	ug/L		10/29/18 16:37	5
Vinyl chloride	**57**	**D**	5.0	5.0	2.5	ug/L		10/29/18 16:37	5
Xylenes, Total	2.5	U	10	2.5	1.2	ug/L		10/29/18 16:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/29/18 16:37*	*5*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*10/29/18 16:37*	*5*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/29/18 16:37*	*5*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/29/18 16:37*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**4.1**		1.1	1.1	0.55	ug/L		10/24/18 15:26	1
Ethylene	**39**		1.0	1.0	0.50	ug/L		10/24/18 15:26	1
Methane (TCD)	**16000**		390	77	39	ug/L		10/24/18 15:26	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	5.0	2.0	mg/L		10/30/18 22:03	5

Client Sample ID: G6M-13-05X_FAL18

Lab Sample ID: 680-159359-6

Date Collected: 10/16/18 09:30

Matrix: Water

Date Received: 10/18/18 09:25

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	66000		50	50	17	ug/L		10/25/18 16:45	1
Manganese	15000		10	3.0	1.0	ug/L		10/25/18 16:45	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	95		3.0	3.0	1.5	ug/L		10/24/18 22:25	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.064	J	0.10	0.050	0.019	mg/L		10/22/18 18:52	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 08:35	1
Total Organic Carbon - Duplicates	210		5.0	2.5	0.78	mg/L		10/19/18 13:54	5
Alkalinity	170		5.0	5.0	1.1	mg/L		10/19/18 19:33	1

Client Sample ID: G6M-95-19X_FAL18

Lab Sample ID: 680-159359-7

Date Collected: 10/17/18 08:20

Matrix: Water

Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:34	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/26/18 01:34	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:34	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:34	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/26/18 01:34	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:34	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/26/18 01:34	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:34	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/26/18 01:34	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:34	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/26/18 01:34	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/26/18 01:34	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/26/18 01:34	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/26/18 01:34	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:34	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:34	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/26/18 01:34	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:34	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/26/18 01:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:34	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/26/18 01:34	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:34	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:34	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/26/18 01:34	1
Acetone	10	U	10	10	7.0	ug/L		10/26/18 01:34	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/26/18 01:34	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:34	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-95-19X_FAL18
Date Collected: 10/17/18 08:20
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:34	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/26/18 01:34	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/26/18 01:34	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:34	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/26/18 01:34	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:34	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/26/18 01:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:34	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:34	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:34	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/26/18 01:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:34	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:34	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:34	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/26/18 01:34	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:34	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:34	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:34	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:34	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/26/18 01:34	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:34	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:34	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:34	1
Tetrachloroethene	**1.6**		1.0	1.0	0.74	ug/L		10/26/18 01:34	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:34	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:34	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:34	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/26/18 01:34	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:34	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/26/18 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*10/26/18 01:34*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*10/26/18 01:34*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/18 01:34*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/26/18 01:34*	*1*

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-95-20X_FAL18
Date Collected: 10/17/18 09:20
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:56	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/26/18 01:56	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:56	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:56	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/26/18 01:56	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:56	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/26/18 01:56	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:56	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/26/18 01:56	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:56	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/26/18 01:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/26/18 01:56	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/26/18 01:56	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/26/18 01:56	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:56	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 01:56	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/26/18 01:56	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:56	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/26/18 01:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:56	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/26/18 01:56	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:56	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/26/18 01:56	1
Acetone	10	U	10	10	7.0	ug/L		10/26/18 01:56	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/26/18 01:56	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:56	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 01:56	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/26/18 01:56	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/26/18 01:56	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:56	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/26/18 01:56	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:56	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/26/18 01:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 01:56	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:56	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:56	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/26/18 01:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 01:56	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 01:56	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:56	1

Client Sample ID: G6M-95-20X_FAL18

Lab Sample ID: 680-159359-8
Date Collected: 10/17/18 09:20
Matrix: Water
Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/26/18 01:56	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 01:56	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 01:56	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 01:56	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 01:56	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/26/18 01:56	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:56	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 01:56	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 01:56	1
Tetrachloroethene	**1.1**		1.0	1.0	0.74	ug/L		10/26/18 01:56	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 01:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 01:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:56	1
Trichloroethene	**0.64**	**J**	1.0	1.0	0.48	ug/L		10/26/18 01:56	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 01:56	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/26/18 01:56	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 01:56	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/26/18 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*10/26/18 01:56*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/26/18 01:56*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/26/18 01:56*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/26/18 01:56*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3500**		50	50	17	ug/L		10/25/18 16:40	1
Manganese	**170**		10	3.0	1.0	ug/L		10/25/18 16:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**18**		3.0	3.0	1.5	ug/L		10/24/18 22:21	1

Client Sample ID: G6M-TB02

Lab Sample ID: 680-159359-9
Date Collected: 10/17/18 00:00
Matrix: Water
Date Received: 10/18/18 09:25

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 22:41	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 22:41	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/25/18 22:41	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 22:41	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 22:41	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/25/18 22:41	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 22:41	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/25/18 22:41	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-TB02
Date Collected: 10/17/18 00:00
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 22:41	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/25/18 22:41	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 22:41	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/25/18 22:41	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/25/18 22:41	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/25/18 22:41	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/25/18 22:41	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 22:41	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 22:41	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/25/18 22:41	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 22:41	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/25/18 22:41	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 22:41	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/25/18 22:41	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 22:41	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 22:41	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/25/18 22:41	1
Acetone	10	U	10	10	7.0	ug/L		10/25/18 22:41	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/25/18 22:41	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 22:41	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 22:41	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/25/18 22:41	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 22:41	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/25/18 22:41	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 22:41	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/25/18 22:41	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 22:41	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 22:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/25/18 22:41	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 22:41	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 22:41	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 22:41	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/25/18 22:41	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 22:41	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 22:41	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 22:41	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/25/18 22:41	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 22:41	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 22:41	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 22:41	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 22:41	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/25/18 22:41	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 22:41	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 22:41	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-TB02
Date Collected: 10/17/18 00:00
Date Received: 10/18/18 09:25

Lab Sample ID: 680-159359-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 22:41	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/25/18 22:41	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 22:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 22:41	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 22:41	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 22:41	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 22:41	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/25/18 22:41	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 22:41	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/25/18 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/25/18 22:41*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*10/25/18 22:41*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/25/18 22:41*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/25/18 22:41*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159359-1	G6M-07-02X_FAL18	91	100	102	99
680-159359-2	AOC50-DUP03_FAL18	91	100	100	99
680-159359-3	G6M-04-10A_FAL18	88	111	98	96
680-159359-3 MS	G6M-04-10A_FAL18	85	105	99	97
680-159359-3 MSD	G6M-04-10A_FAL18	85	108	101	99
680-159359-4	G6M-04-10X_FAL18	90	98	100	98
680-159359-5	G6M-TB01	87	97	97	98
680-159359-6	G6M-13-05X_FAL18	93	91	99	100
680-159359-7	G6M-95-19X_FAL18	90	97	98	97
680-159359-8	G6M-95-20X_FAL18	90	99	98	98
680-159359-9	G6M-TB02	89	96	99	99
LCS 680-544987/5	Lab Control Sample	86	87	99	98
LCS 680-545027/3	Lab Control Sample	88	86	101	102
LCS 680-545250/4	Lab Control Sample	88	94	97	102
LCSD 680-544987/6	Lab Control Sample Dup	87	89	97	97
LCSD 680-545027/4	Lab Control Sample Dup	87	89	99	100
LCSD 680-545250/5	Lab Control Sample Dup	88	93	97	102
MB 680-544987/10	Method Blank	87	99	100	97
MB 680-545027/9	Method Blank	89	95	100	98
MB 680-545250/9	Method Blank	87	91	96	103

Surrogate Legend

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

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

Lab Sample ID: MB 680-544987/10
Matrix: Water
Analysis Batch: 544987

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 21:35	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 21:35	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/25/18 21:35	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 21:35	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 21:35	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/25/18 21:35	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 21:35	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/25/18 21:35	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 21:35	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/25/18 21:35	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 21:35	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/25/18 21:35	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/25/18 21:35	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/25/18 21:35	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/25/18 21:35	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 21:35	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/25/18 21:35	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/25/18 21:35	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 21:35	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/25/18 21:35	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 21:35	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/25/18 21:35	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 21:35	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 21:35	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/25/18 21:35	1
Acetone	10	U	10	10	7.0	ug/L		10/25/18 21:35	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/25/18 21:35	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 21:35	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/25/18 21:35	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/25/18 21:35	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 21:35	1
Chlorobenzene	0.50	U M	1.0	0.50	0.26	ug/L		10/25/18 21:35	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 21:35	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/25/18 21:35	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 21:35	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 21:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/25/18 21:35	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/25/18 21:35	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 21:35	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 21:35	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/25/18 21:35	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/25/18 21:35	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/25/18 21:35	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1

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

Lab Sample ID: MB 680-544987/10
Matrix: Water
Analysis Batch: 544987

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 21:35	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/25/18 21:35	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/25/18 21:35	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/25/18 21:35	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/25/18 21:35	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/25/18 21:35	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/25/18 21:35	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 21:35	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/25/18 21:35	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/25/18 21:35	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/25/18 21:35	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 21:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/25/18 21:35	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 21:35	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/25/18 21:35	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/25/18 21:35	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/25/18 21:35	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/25/18 21:35	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/25/18 21:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/25/18 21:35*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/25/18 21:35*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/25/18 21:35*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/25/18 21:35*	*1*

Lab Sample ID: LCS 680-544987/5
Matrix: Water
Analysis Batch: 544987

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	49.7		ug/L		99	78 - 124
1,1,1-Trichloroethane	50.0	47.9		ug/L		96	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.1		ug/L		94	71 - 121
1,1,2-Trichloroethane	50.0	47.7		ug/L		95	80 - 119
1,1-Dichloroethane	50.0	43.6		ug/L		87	77 - 125
1,1-Dichloroethene	50.0	48.0		ug/L		96	71 - 131
1,1-Dichloropropene	50.0	46.9		ug/L		94	79 - 125
1,2,3-Trichlorobenzene	50.0	48.0		ug/L		96	69 - 129
1,2,3-Trichloropropane	50.0	49.5		ug/L		99	73 - 122
1,2,4-Trichlorobenzene	50.0	47.9		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	50.0	50.5		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.2		ug/L		92	62 - 128
1,2-Dichlorobenzene	50.0	48.1		ug/L		96	80 - 119
1,2-Dichloroethane	50.0	44.0		ug/L		88	73 - 128
1,2-Dichloroethene, Total	100	94.6		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	46.2		ug/L		92	78 - 122

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

Lab Sample ID: LCS 680-544987/5
Matrix: Water
Analysis Batch: 544987

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	50.7		ug/L		101	75 - 124
1,3-Dichlorobenzene	50.0	47.1		ug/L		94	80 - 119
1,3-Dichloropropane	50.0	45.8		ug/L		92	80 - 119
1,4-Dichlorobenzene	50.0	47.3		ug/L		95	79 - 118
2,2-Dichloropropane	50.0	43.1	M	ug/L		86	60 - 139
2-Butanone (MEK)	250	201		ug/L		80	56 - 143
2-Chlorotoluene	50.0	51.7		ug/L		103	79 - 122
2-Hexanone	250	204		ug/L		81	57 - 139
4-Chlorotoluene	50.0	52.2		ug/L		104	78 - 122
4-Isopropyltoluene	50.0	48.7		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	207		ug/L		83	67 - 130
Acetone	250	191		ug/L		76	39 - 160
Benzene	50.0	46.5		ug/L		93	79 - 120
Bromobenzene	50.0	52.4		ug/L		105	80 - 120
Bromoform	50.0	49.0		ug/L		98	66 - 130
Bromomethane	50.0	73.3	Q	ug/L		147	53 - 141
Carbon disulfide	50.0	45.8		ug/L		92	64 - 133
Carbon tetrachloride	50.0	47.6		ug/L		95	72 - 136
Chlorobenzene	50.0	50.9		ug/L		102	82 - 118
Chlorobromomethane	50.0	45.8		ug/L		92	78 - 123
Chlorodibromomethane	50.0	48.6		ug/L		97	74 - 126
Chloroethane	50.0	43.2	M	ug/L		86	60 - 138
Chloroform	50.0	45.6		ug/L		91	79 - 124
Chloromethane	50.0	43.7		ug/L		87	50 - 139
cis-1,2-Dichloroethene	50.0	47.1		ug/L		94	78 - 123
cis-1,3-Dichloropropene	50.0	48.0		ug/L		96	75 - 124
Dibromomethane	50.0	45.4		ug/L		91	79 - 123
Dichlorobromomethane	50.0	45.0		ug/L		90	79 - 125
Dichlorodifluoromethane	50.0	44.2		ug/L		88	32 - 152
Ethylbenzene	50.0	49.4		ug/L		99	79 - 121
Ethylene Dibromide	50.0	47.5		ug/L		95	75 - 127
Hexachlorobutadiene	50.0	47.4		ug/L		95	66 - 134
Isopropylbenzene	50.0	51.7		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	43.6		ug/L		87	71 - 124
Methylene Chloride	50.0	45.6		ug/L		91	74 - 124
m-Xylene & p-Xylene	50.0	49.3		ug/L		99	80 - 121
Naphthalene	50.0	44.5		ug/L		89	61 - 128
n-Butylbenzene	50.0	45.6		ug/L		91	75 - 128
N-Propylbenzene	50.0	52.8		ug/L		106	76 - 126
o-Xylene	50.0	50.4		ug/L		101	78 - 122
sec-Butylbenzene	50.0	52.0		ug/L		104	77 - 126
Styrene	50.0	48.6		ug/L		97	78 - 123
tert-Butylbenzene	50.0	52.9		ug/L		106	78 - 124
Tetrachloroethene	50.0	50.4		ug/L		101	74 - 129
Toluene	50.0	47.8		ug/L		96	80 - 121
trans-1,2-Dichloroethene	50.0	47.5		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	43.9		ug/L		88	73 - 127
Trichloroethene	50.0	48.2		ug/L		96	79 - 123

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

Lab Sample ID: LCS 680-544987/5
Matrix: Water
Analysis Batch: 544987

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	48.3		ug/L		97	65 - 141
Vinyl acetate	100	70.7		ug/L		71	54 - 146
Vinyl chloride	50.0	47.2		ug/L		94	58 - 137
Xylenes, Total	100	99.7		ug/L		100	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*87*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

Lab Sample ID: LCSD 680-544987/6
Matrix: Water
Analysis Batch: 544987

Client Sample 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	1	20
1,1,1-Trichloroethane	50.0	47.5		ug/L		95	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	46.3		ug/L		93	80 - 119	3	20
1,1-Dichloroethane	50.0	42.7		ug/L		85	77 - 125	2	20
1,1-Dichloroethene	50.0	48.5		ug/L		97	71 - 131	1	20
1,1-Dichloropropene	50.0	45.1		ug/L		90	79 - 125	4	20
1,2,3-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 129	1	20
1,2,3-Trichloropropane	50.0	48.8		ug/L		98	73 - 122	1	20
1,2,4-Trichlorobenzene	50.0	48.7		ug/L		97	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	49.7		ug/L		99	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	47.8		ug/L		96	62 - 128	3	20
1,2-Dichlorobenzene	50.0	48.5		ug/L		97	80 - 119	1	20
1,2-Dichloroethane	50.0	43.8		ug/L		88	73 - 128	1	20
1,2-Dichloroethene, Total	100	92.7		ug/L		93	79 - 121	2	20
1,2-Dichloropropane	50.0	46.6		ug/L		93	78 - 122	1	20
1,3,5-Trimethylbenzene	50.0	50.5		ug/L		101	75 - 124	0	20
1,3-Dichlorobenzene	50.0	47.8		ug/L		96	80 - 119	1	20
1,3-Dichloropropane	50.0	45.5		ug/L		91	80 - 119	1	20
1,4-Dichlorobenzene	50.0	47.4		ug/L		95	79 - 118	0	20
2,2-Dichloropropane	50.0	42.4	M	ug/L		85	60 - 139	2	20
2-Butanone (MEK)	250	202		ug/L		81	56 - 143	0	20
2-Chlorotoluene	50.0	51.0		ug/L		102	79 - 122	1	20
2-Hexanone	250	203		ug/L		81	57 - 139	0	20
4-Chlorotoluene	50.0	52.0		ug/L		104	78 - 122	0	20
4-Isopropyltoluene	50.0	48.1		ug/L		96	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	210		ug/L		84	67 - 130	1	20
Acetone	250	192		ug/L		77	39 - 160	0	20
Benzene	50.0	45.2		ug/L		90	79 - 120	3	20
Bromobenzene	50.0	52.3		ug/L		105	80 - 120	0	20
Bromoform	50.0	49.5		ug/L		99	66 - 130	1	20
Bromomethane	50.0	70.1		ug/L		140	53 - 141	4	20

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

Lab Sample ID: LCSD 680-544987/6
Matrix: Water
Analysis Batch: 544987

Client Sample 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 disulfide			50.0	44.2		ug/L		88	64 - 133	4	20
Carbon tetrachloride			50.0	45.9		ug/L		92	72 - 136	4	20
Chlorobenzene			50.0	50.3		ug/L		101	82 - 118	1	20
Chlorobromomethane			50.0	44.9		ug/L		90	78 - 123	2	20
Chlorodibromomethane			50.0	49.3		ug/L		99	74 - 126	1	20
Chloroethane			50.0	41.8	M	ug/L		84	60 - 138	3	20
Chloroform			50.0	46.0		ug/L		92	79 - 124	1	20
Chloromethane			50.0	42.0		ug/L		84	50 - 139	4	20
cis-1,2-Dichloroethene			50.0	46.6		ug/L		93	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	47.0		ug/L		94	75 - 124	2	20
Dibromomethane			50.0	46.6		ug/L		93	79 - 123	3	20
Dichlorobromomethane			50.0	44.8		ug/L		90	79 - 125	1	20
Dichlorodifluoromethane			50.0	42.2		ug/L		84	32 - 152	5	20
Ethylbenzene			50.0	48.7		ug/L		97	79 - 121	1	20
Ethylene Dibromide			50.0	47.7		ug/L		95	75 - 127	1	20
Hexachlorobutadiene			50.0	47.6		ug/L		95	66 - 134	0	20
Isopropylbenzene			50.0	51.3		ug/L		103	72 - 131	1	20
Methyl tert-butyl ether			50.0	43.6		ug/L		87	71 - 124	0	20
Methylene Chloride			50.0	45.5		ug/L		91	74 - 124	0	20
m-Xylene & p-Xylene			50.0	48.6		ug/L		97	80 - 121	1	20
Naphthalene			50.0	47.1		ug/L		94	61 - 128	6	20
n-Butylbenzene			50.0	45.8		ug/L		92	75 - 128	0	20
N-Propylbenzene			50.0	52.2		ug/L		104	76 - 126	1	20
o-Xylene			50.0	50.8		ug/L		102	78 - 122	1	20
sec-Butylbenzene			50.0	52.0		ug/L		104	77 - 126	0	20
Styrene			50.0	48.8		ug/L		98	78 - 123	0	20
tert-Butylbenzene			50.0	52.0		ug/L		104	78 - 124	2	20
Tetrachloroethene			50.0	48.8		ug/L		98	74 - 129	3	20
Toluene			50.0	47.3		ug/L		95	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	46.1		ug/L		92	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	44.1		ug/L		88	73 - 127	1	20
Trichloroethene			50.0	47.9		ug/L		96	79 - 123	1	20
Trichlorofluoromethane			50.0	47.2		ug/L		94	65 - 141	2	20
Vinyl acetate			100	71.0		ug/L		71	54 - 146	0	20
Vinyl chloride			50.0	43.6		ug/L		87	58 - 137	8	20
Xylenes, Total			100	99.4		ug/L		99	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

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

Lab Sample ID: MB 680-545027/9
Matrix: Water
Analysis Batch: 545027

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 11:30	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 11:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/26/18 11:30	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 11:30	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 11:30	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/26/18 11:30	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 11:30	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/26/18 11:30	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 11:30	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/26/18 11:30	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 11:30	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/26/18 11:30	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/26/18 11:30	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/26/18 11:30	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/26/18 11:30	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 11:30	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/26/18 11:30	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/26/18 11:30	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 11:30	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/26/18 11:30	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 11:30	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/26/18 11:30	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 11:30	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 11:30	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/26/18 11:30	1
Acetone	10	U	10	10	7.0	ug/L		10/26/18 11:30	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 11:30	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 11:30	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/26/18 11:30	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/26/18 11:30	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 11:30	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/26/18 11:30	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 11:30	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/26/18 11:30	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 11:30	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 11:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/26/18 11:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/26/18 11:30	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 11:30	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 11:30	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/26/18 11:30	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/26/18 11:30	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/26/18 11:30	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1

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

Lab Sample ID: MB 680-545027/9
Matrix: Water
Analysis Batch: 545027

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 11:30	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/26/18 11:30	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/26/18 11:30	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/26/18 11:30	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/26/18 11:30	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/26/18 11:30	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/26/18 11:30	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 11:30	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/26/18 11:30	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/26/18 11:30	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/26/18 11:30	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 11:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/26/18 11:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 11:30	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/26/18 11:30	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/26/18 11:30	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/26/18 11:30	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/26/18 11:30	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/26/18 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*10/26/18 11:30*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*10/26/18 11:30*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/26/18 11:30*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*10/26/18 11:30*	*1*

Lab Sample ID: LCS 680-545027/3
Matrix: Water
Analysis Batch: 545027

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	52.8		ug/L		106	78 - 124
1,1,1-Trichloroethane	50.0	49.2		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.4		ug/L		99	71 - 121
1,1,2-Trichloroethane	50.0	48.1		ug/L		96	80 - 119
1,1-Dichloroethane	50.0	44.6		ug/L		89	77 - 125
1,1-Dichloroethene	50.0	50.4		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	47.5		ug/L		95	79 - 125
1,2,3-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 129
1,2,3-Trichloropropane	50.0	51.8		ug/L		104	73 - 122
1,2,4-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 130
1,2,4-Trimethylbenzene	50.0	51.1		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	48.1		ug/L		96	62 - 128
1,2-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119
1,2-Dichloroethane	50.0	45.8		ug/L		92	73 - 128
1,2-Dichloroethene, Total	100	96.6		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	46.9		ug/L		94	78 - 122

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

Lab Sample ID: LCS 680-545027/3
Matrix: Water
Analysis Batch: 545027

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	51.5		ug/L		103	75 - 124
1,3-Dichlorobenzene	50.0	48.0		ug/L		96	80 - 119
1,3-Dichloropropane	50.0	47.9		ug/L		96	80 - 119
1,4-Dichlorobenzene	50.0	47.5		ug/L		95	79 - 118
2,2-Dichloropropane	50.0	46.3	M	ug/L		93	60 - 139
2-Butanone (MEK)	250	214		ug/L		86	56 - 143
2-Chlorotoluene	50.0	52.4		ug/L		105	79 - 122
2-Hexanone	250	214		ug/L		86	57 - 139
4-Chlorotoluene	50.0	52.3		ug/L		105	78 - 122
4-Isopropyltoluene	50.0	48.5		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	218		ug/L		87	67 - 130
Acetone	250	208		ug/L		83	39 - 160
Benzene	50.0	47.6		ug/L		95	79 - 120
Bromobenzene	50.0	53.0		ug/L		106	80 - 120
Bromoform	50.0	50.9		ug/L		102	66 - 130
Bromomethane	50.0	71.4	M Q	ug/L		143	53 - 141
Carbon disulfide	50.0	46.0		ug/L		92	64 - 133
Carbon tetrachloride	50.0	48.3		ug/L		97	72 - 136
Chlorobenzene	50.0	52.2		ug/L		104	82 - 118
Chlorobromomethane	50.0	44.2		ug/L		88	78 - 123
Chlorodibromomethane	50.0	50.2		ug/L		100	74 - 126
Chloroethane	50.0	44.6	M	ug/L		89	60 - 138
Chloroform	50.0	47.4		ug/L		95	79 - 124
Chloromethane	50.0	45.0		ug/L		90	50 - 139
cis-1,2-Dichloroethene	50.0	48.1		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	49.9		ug/L		100	75 - 124
Dibromomethane	50.0	46.5		ug/L		93	79 - 123
Dichlorobromomethane	50.0	46.0		ug/L		92	79 - 125
Dichlorodifluoromethane	50.0	44.8		ug/L		90	32 - 152
Ethylbenzene	50.0	50.5		ug/L		101	79 - 121
Ethylene Dibromide	50.0	48.4		ug/L		97	75 - 127
Hexachlorobutadiene	50.0	47.5		ug/L		95	66 - 134
Isopropylbenzene	50.0	52.5		ug/L		105	72 - 131
Methyl tert-butyl ether	50.0	46.1		ug/L		92	71 - 124
Methylene Chloride	50.0	46.7		ug/L		93	74 - 124
m-Xylene & p-Xylene	50.0	50.0		ug/L		100	80 - 121
Naphthalene	50.0	45.5		ug/L		91	61 - 128
n-Butylbenzene	50.0	45.2		ug/L		90	75 - 128
N-Propylbenzene	50.0	53.1		ug/L		106	76 - 126
o-Xylene	50.0	50.7		ug/L		101	78 - 122
sec-Butylbenzene	50.0	52.5		ug/L		105	77 - 126
Styrene	50.0	50.2		ug/L		100	78 - 123
tert-Butylbenzene	50.0	52.4		ug/L		105	78 - 124
Tetrachloroethene	50.0	51.2		ug/L		102	74 - 129
Toluene	50.0	49.9		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	75 - 124
trans-1,3-Dichloropropene	50.0	45.5		ug/L		91	73 - 127
Trichloroethene	50.0	49.0		ug/L		98	79 - 123

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

Lab Sample ID: LCS 680-545027/3
Matrix: Water
Analysis Batch: 545027

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			50.0	48.9		ug/L		98	65 - 141		
Vinyl acetate			100	78.8		ug/L		79	54 - 146		
Vinyl chloride			50.0	47.8		ug/L		96	58 - 137		
Xylenes, Total			100	101		ug/L		101	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*86*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 680-545027/4
Matrix: Water
Analysis Batch: 545027

Client Sample 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	52.5		ug/L		105	78 - 124	1	20
1,1,1-Trichloroethane			50.0	49.2		ug/L		98	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	48.4		ug/L		97	71 - 121	2	20
1,1,2-Trichloroethane			50.0	48.6		ug/L		97	80 - 119	1	20
1,1-Dichloroethane			50.0	44.0		ug/L		88	77 - 125	1	20
1,1-Dichloroethene			50.0	50.6		ug/L		101	71 - 131	0	20
1,1-Dichloropropene			50.0	46.6		ug/L		93	79 - 125	2	20
1,2,3-Trichlorobenzene			50.0	49.1		ug/L		98	69 - 129	2	20
1,2,3-Trichloropropane			50.0	50.0		ug/L		100	73 - 122	4	20
1,2,4-Trichlorobenzene			50.0	49.9		ug/L		100	69 - 130	4	20
1,2,4-Trimethylbenzene			50.0	52.2		ug/L		104	76 - 124	2	20
1,2-Dibromo-3-Chloropropane			50.0	46.3		ug/L		93	62 - 128	4	20
1,2-Dichlorobenzene			50.0	48.8		ug/L		98	80 - 119	1	20
1,2-Dichloroethane			50.0	44.5		ug/L		89	73 - 128	3	20
1,2-Dichloroethene, Total			100	96.4		ug/L		96	79 - 121	0	20
1,2-Dichloropropane			50.0	47.6		ug/L		95	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	52.3		ug/L		105	75 - 124	2	20
1,3-Dichlorobenzene			50.0	48.2		ug/L		96	80 - 119	0	20
1,3-Dichloropropane			50.0	46.3		ug/L		93	80 - 119	3	20
1,4-Dichlorobenzene			50.0	48.3		ug/L		97	79 - 118	2	20
2,2-Dichloropropane			50.0	46.4		ug/L		93	60 - 139	0	20
2-Butanone (MEK)			250	203		ug/L		81	56 - 143	5	20
2-Chlorotoluene			50.0	53.6		ug/L		107	79 - 122	2	20
2-Hexanone			250	203		ug/L		81	57 - 139	6	20
4-Chlorotoluene			50.0	53.9		ug/L		108	78 - 122	3	20
4-Isopropyltoluene			50.0	48.4		ug/L		97	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)			250	211		ug/L		84	67 - 130	3	20
Acetone			250	198		ug/L		79	39 - 160	5	20
Benzene			50.0	46.6		ug/L		93	79 - 120	2	20
Bromobenzene			50.0	54.8		ug/L		110	80 - 120	3	20
Bromoform			50.0	51.0		ug/L		102	66 - 130	0	20
Bromomethane			50.0	75.1	M Q	ug/L		150	53 - 141	5	20

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

Lab Sample ID: LCSD 680-545027/4
Matrix: Water
Analysis Batch: 545027

Client Sample 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 disulfide			50.0	46.9		ug/L		94	64 - 133	2	20
Carbon tetrachloride			50.0	48.0		ug/L		96	72 - 136	1	20
Chlorobenzene			50.0	52.5		ug/L		105	82 - 118	0	20
Chlorobromomethane			50.0	43.9		ug/L		88	78 - 123	1	20
Chlorodibromomethane			50.0	49.7		ug/L		99	74 - 126	1	20
Chloroethane			50.0	45.4	M	ug/L		91	60 - 138	2	20
Chloroform			50.0	45.8		ug/L		92	79 - 124	3	20
Chloromethane			50.0	45.1		ug/L		90	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	48.2		ug/L		96	78 - 123	0	20
cis-1,3-Dichloropropene			50.0	49.0		ug/L		98	75 - 124	2	20
Dibromomethane			50.0	46.8		ug/L		94	79 - 123	1	20
Dichlorobromomethane			50.0	45.4		ug/L		91	79 - 125	2	20
Dichlorodifluoromethane			50.0	45.3		ug/L		91	32 - 152	1	20
Ethylbenzene			50.0	51.6		ug/L		103	79 - 121	2	20
Ethylene Dibromide			50.0	47.2		ug/L		94	75 - 127	3	20
Hexachlorobutadiene			50.0	49.0		ug/L		98	66 - 134	3	20
Isopropylbenzene			50.0	53.7		ug/L		107	72 - 131	2	20
Methyl tert-butyl ether			50.0	44.2		ug/L		88	71 - 124	4	20
Methylene Chloride			50.0	47.5		ug/L		95	74 - 124	2	20
m-Xylene & p-Xylene			50.0	51.5		ug/L		103	80 - 121	3	20
Naphthalene			50.0	46.2		ug/L		92	61 - 128	1	20
n-Butylbenzene			50.0	46.0		ug/L		92	75 - 128	2	20
N-Propylbenzene			50.0	55.7		ug/L		111	76 - 126	5	20
o-Xylene			50.0	52.1		ug/L		104	78 - 122	3	20
sec-Butylbenzene			50.0	54.1		ug/L		108	77 - 126	3	20
Styrene			50.0	50.3		ug/L		101	78 - 123	0	20
tert-Butylbenzene			50.0	54.9		ug/L		110	78 - 124	5	20
Tetrachloroethene			50.0	51.3		ug/L		103	74 - 129	0	20
Toluene			50.0	49.1		ug/L		98	80 - 121	2	20
trans-1,2-Dichloroethene			50.0	48.3		ug/L		97	75 - 124	0	20
trans-1,3-Dichloropropene			50.0	44.6		ug/L		89	73 - 127	2	20
Trichloroethene			50.0	48.6		ug/L		97	79 - 123	1	20
Trichlorofluoromethane			50.0	49.0		ug/L		98	65 - 141	0	20
Vinyl acetate			100	76.6		ug/L		77	54 - 146	3	20
Vinyl chloride			50.0	48.2		ug/L		96	58 - 137	1	20
Xylenes, Total			100	104		ug/L		104	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*89*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

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

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 545027

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	1.0	U	50.0	51.8		ug/L		104	78 - 124
1,1,1-Trichloroethane	1.0	U	50.0	48.4		ug/L		97	74 - 131
1,1,2,2-Tetrachloroethane	1.0	U	50.0	48.1		ug/L		96	71 - 121
1,1,2-Trichloroethane	0.50	U	50.0	46.0		ug/L		92	80 - 119
1,1-Dichloroethane	1.0	U	50.0	45.6		ug/L		91	77 - 125
1,1-Dichloroethene	1.0	U	50.0	50.3		ug/L		101	71 - 131
1,1-Dichloropropene	1.0	U	50.0	45.0		ug/L		90	79 - 125
1,2,3-Trichlorobenzene	5.0	U J1	50.0	30.1	J1	ug/L		60	69 - 129
1,2,3-Trichloropropane	1.0	U	50.0	51.0		ug/L		102	73 - 122
1,2,4-Trichlorobenzene	5.0	U J1	50.0	32.6	J1	ug/L		65	69 - 130
1,2,4-Trimethylbenzene	1.0	U J1	50.0	37.6	J1	ug/L		75	76 - 124
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	52.6		ug/L		105	62 - 128
1,2-Dichlorobenzene	1.0	U	50.0	48.3		ug/L		97	80 - 119
1,2-Dichloroethane	1.0	U M	50.0	43.3		ug/L		87	73 - 128
1,2-Dichloroethene, Total	1.9	J	100	98.8		ug/L		97	79 - 121
1,2-Dichloropropane	1.0	U	50.0	46.5		ug/L		93	78 - 122
1,3,5-Trimethylbenzene	0.50	U M	50.0	37.6		ug/L		75	75 - 124
1,3-Dichlorobenzene	1.0	U	50.0	46.8		ug/L		94	80 - 119
1,3-Dichloropropane	1.0	U	50.0	44.1		ug/L		88	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	46.6		ug/L		93	79 - 118
2,2-Dichloropropane	1.0	U	50.0	40.0	M	ug/L		80	60 - 139
2-Butanone (MEK)	13		250	215		ug/L		81	56 - 143
2-Chlorotoluene	0.50	U	50.0	42.8		ug/L		86	79 - 122
2-Hexanone	5.0	U	250	219		ug/L		88	57 - 139
4-Chlorotoluene	1.0	U	50.0	43.2		ug/L		86	78 - 122
4-Isopropyltoluene	1.0	U	50.0	38.6		ug/L		77	77 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U	250	219		ug/L		87	67 - 130
Acetone	8.5	J	250	188		ug/L		72	39 - 160
Benzene	1.0	U	50.0	47.0		ug/L		94	79 - 120
Bromobenzene	1.0	U	50.0	48.8		ug/L		98	80 - 120
Bromoform	1.0	U	50.0	48.2		ug/L		96	66 - 130
Bromomethane	5.0	U Q J1	50.0	41.3		ug/L		83	53 - 141
Carbon disulfide	2.0	U	50.0	46.1		ug/L		92	64 - 133
Carbon tetrachloride	0.50	U	50.0	46.0		ug/L		92	72 - 136
Chlorobenzene	0.50	U	50.0	51.8		ug/L		104	82 - 118
Chlorobromomethane	1.0	U	50.0	42.5		ug/L		85	78 - 123
Chlorodibromomethane	0.50	U	50.0	46.3		ug/L		93	74 - 126
Chloroethane	5.0	U	50.0	44.1	M	ug/L		88	60 - 138
Chloroform	1.0	U	50.0	47.1		ug/L		94	79 - 124
Chloromethane	1.0	U	50.0	41.9		ug/L		84	50 - 139
cis-1,2-Dichloroethene	1.9		50.0	49.7		ug/L		96	78 - 123
cis-1,3-Dichloropropene	1.0	U	50.0	46.2		ug/L		92	75 - 124
Dibromomethane	1.0	U	50.0	44.6		ug/L		89	79 - 123
Dichlorobromomethane	1.0	U	50.0	44.7		ug/L		89	79 - 125
Dichlorodifluoromethane	1.0	U	50.0	43.0	M	ug/L		86	32 - 152
Ethylbenzene	0.50	U M	50.0	47.1		ug/L		94	79 - 121
Ethylene Dibromide	1.0	U	50.0	45.8		ug/L		92	75 - 127
Hexachlorobutadiene	5.0	U	50.0	43.3		ug/L		87	66 - 134

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

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 545027

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	1.0	U	50.0	42.3		ug/L		85	72 - 131
Methyl tert-butyl ether	0.50	U	50.0	41.6		ug/L		83	71 - 124
Methylene Chloride	5.0	U	50.0	44.8		ug/L		90	74 - 124
m-Xylene & p-Xylene	1.0	U	50.0	46.5		ug/L		93	80 - 121
Naphthalene	5.0	U	50.0	36.0		ug/L		72	61 - 128
n-Butylbenzene	1.0	U J1	50.0	35.9	J1	ug/L		72	75 - 128
N-Propylbenzene	1.0	U	50.0	39.6		ug/L		79	76 - 126
o-Xylene	0.50	U	50.0	48.0		ug/L		96	78 - 122
sec-Butylbenzene	1.0	U J1	50.0	33.2	J1	ug/L		66	77 - 126
Styrene	0.50	U	50.0	46.8		ug/L		94	78 - 123
tert-Butylbenzene	1.0	U J1	50.0	34.5	J1	ug/L		69	78 - 124
Tetrachloroethene	1.0	U	50.0	43.7		ug/L		87	74 - 129
Toluene	1.0	U	50.0	47.4		ug/L		95	80 - 121
trans-1,2-Dichloroethene	1.0	U	50.0	49.1		ug/L		98	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	41.4		ug/L		83	73 - 127
Trichloroethene	1.0	U	50.0	47.4		ug/L		95	79 - 123
Trichlorofluoromethane	1.0	U	50.0	48.4		ug/L		97	65 - 141
Vinyl acetate	2.0	U	100	69.5		ug/L		70	54 - 146
Vinyl chloride	1.2		50.0	50.5	M	ug/L		99	58 - 137
Xylenes, Total	0.50	U	100	94.5		ug/L		95	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 545027

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1.0	U	50.0	51.9		ug/L		104	78 - 124	0	20
1,1,1-Trichloroethane	1.0	U	50.0	49.2		ug/L		98	74 - 131	2	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	47.1		ug/L		94	71 - 121	2	20
1,1,2-Trichloroethane	0.50	U	50.0	45.7		ug/L		91	80 - 119	1	20
1,1-Dichloroethane	1.0	U	50.0	46.0		ug/L		92	77 - 125	1	20
1,1-Dichloroethene	1.0	U	50.0	51.3		ug/L		103	71 - 131	2	20
1,1-Dichloropropene	1.0	U	50.0	46.2		ug/L		92	79 - 125	3	20
1,2,3-Trichlorobenzene	5.0	U J1	50.0	33.4	J1	ug/L		67	69 - 129	10	20
1,2,3-Trichloropropane	1.0	U	50.0	49.8		ug/L		100	73 - 122	3	20
1,2,4-Trichlorobenzene	5.0	U J1	50.0	35.7		ug/L		71	69 - 130	9	20
1,2,4-Trimethylbenzene	1.0	U J1	50.0	39.1		ug/L		78	76 - 124	4	20
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	54.6		ug/L		109	62 - 128	4	20
1,2-Dichlorobenzene	1.0	U	50.0	50.6		ug/L		101	80 - 119	4	20
1,2-Dichloroethane	1.0	U M	50.0	43.3		ug/L		87	73 - 128	0	20
1,2-Dichloroethene, Total	1.9	J	100	101		ug/L		99	79 - 121	2	20
1,2-Dichloropropane	1.0	U	50.0	47.2		ug/L		94	78 - 122	1	20

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

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 545027

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	0.50	U M	50.0	38.3		ug/L		77	75 - 124	2	20
1,3-Dichlorobenzene	1.0	U	50.0	47.9		ug/L		96	80 - 119	2	20
1,3-Dichloropropane	1.0	U	50.0	45.1		ug/L		90	80 - 119	2	20
1,4-Dichlorobenzene	1.0	U	50.0	48.3		ug/L		97	79 - 118	4	20
2,2-Dichloropropane	1.0	U	50.0	40.6	M	ug/L		81	60 - 139	1	20
2-Butanone (MEK)	13		250	218		ug/L		82	56 - 143	1	20
2-Chlorotoluene	0.50	U	50.0	43.6		ug/L		87	79 - 122	2	20
2-Hexanone	5.0	U	250	212		ug/L		85	57 - 139	3	20
4-Chlorotoluene	1.0	U	50.0	43.8		ug/L		88	78 - 122	2	20
4-Isopropyltoluene	1.0	U	50.0	41.4		ug/L		83	77 - 127	7	20
4-Methyl-2-pentanone (MIBK)	5.0	U	250	218		ug/L		87	67 - 130	0	20
Acetone	8.5	J	250	199		ug/L		76	39 - 160	6	20
Benzene	1.0	U	50.0	48.1		ug/L		96	79 - 120	2	20
Bromobenzene	1.0	U	50.0	50.1		ug/L		100	80 - 120	3	20
Bromoform	1.0	U	50.0	49.8		ug/L		100	66 - 130	3	20
Bromomethane	5.0	U Q J1	50.0	53.7	J1	ug/L		107	53 - 141	26	20
Carbon disulfide	2.0	U	50.0	46.5		ug/L		93	64 - 133	1	20
Carbon tetrachloride	0.50	U	50.0	47.2		ug/L		94	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	52.8		ug/L		106	82 - 118	2	20
Chlorobromomethane	1.0	U	50.0	42.9		ug/L		86	78 - 123	1	20
Chlorodibromomethane	0.50	U	50.0	47.0		ug/L		94	74 - 126	1	20
Chloroethane	5.0	U	50.0	47.1	M	ug/L		94	60 - 138	7	20
Chloroform	1.0	U	50.0	47.4		ug/L		95	79 - 124	1	20
Chloromethane	1.0	U	50.0	43.1		ug/L		86	50 - 139	3	20
cis-1,2-Dichloroethene	1.9		50.0	51.0		ug/L		98	78 - 123	3	20
cis-1,3-Dichloropropene	1.0	U	50.0	46.9		ug/L		94	75 - 124	1	20
Dibromomethane	1.0	U	50.0	45.0		ug/L		90	79 - 123	1	20
Dichlorobromomethane	1.0	U	50.0	44.5		ug/L		89	79 - 125	0	20
Dichlorodifluoromethane	1.0	U	50.0	43.7	M	ug/L		87	32 - 152	2	20
Ethylbenzene	0.50	U M	50.0	48.0		ug/L		96	79 - 121	2	20
Ethylene Dibromide	1.0	U	50.0	45.7		ug/L		91	75 - 127	0	20
Hexachlorobutadiene	5.0	U	50.0	49.4		ug/L		99	66 - 134	13	20
Isopropylbenzene	1.0	U	50.0	43.6		ug/L		87	72 - 131	3	20
Methyl tert-butyl ether	0.50	U	50.0	42.7		ug/L		85	71 - 124	3	20
Methylene Chloride	5.0	U	50.0	46.3		ug/L		93	74 - 124	3	20
m-Xylene & p-Xylene	1.0	U	50.0	47.8		ug/L		96	80 - 121	3	20
Naphthalene	5.0	U	50.0	37.3		ug/L		75	61 - 128	4	20
n-Butylbenzene	1.0	U J1	50.0	38.9		ug/L		78	75 - 128	8	20
N-Propylbenzene	1.0	U	50.0	40.6		ug/L		81	76 - 126	3	20
o-Xylene	0.50	U	50.0	48.5		ug/L		97	78 - 122	1	20
sec-Butylbenzene	1.0	U J1	50.0	35.0	J1	ug/L		70	77 - 126	5	20
Styrene	0.50	U	50.0	47.1		ug/L		94	78 - 123	1	20
tert-Butylbenzene	1.0	U J1	50.0	36.7	J1	ug/L		73	78 - 124	6	20
Tetrachloroethene	1.0	U	50.0	44.6		ug/L		89	74 - 129	2	20
Toluene	1.0	U	50.0	47.7		ug/L		95	80 - 121	1	20
trans-1,2-Dichloroethene	1.0	U	50.0	50.2		ug/L		100	75 - 124	2	20
trans-1,3-Dichloropropene	1.0	U	50.0	42.6		ug/L		85	73 - 127	3	20
Trichloroethene	1.0	U	50.0	47.8		ug/L		96	79 - 123	1	20

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

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 545027

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	1.0	U	50.0	50.1		ug/L		100	65 - 141	3	20
Vinyl acetate	2.0	U	100	71.6		ug/L		72	54 - 146	3	20
Vinyl chloride	1.2		50.0	49.9	M	ug/L		97	58 - 137	1	20
Xylenes, Total	0.50	U	100	96.3		ug/L		96	79 - 121	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*108*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: MB 680-545250/9
Matrix: Water
Analysis Batch: 545250

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/29/18 11:59	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/29/18 11:59	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/29/18 11:59	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/29/18 11:59	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/29/18 11:59	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/29/18 11:59	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/29/18 11:59	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/29/18 11:59	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/29/18 11:59	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/29/18 11:59	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/29/18 11:59	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/29/18 11:59	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/29/18 11:59	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/29/18 11:59	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/29/18 11:59	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/29/18 11:59	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/29/18 11:59	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/29/18 11:59	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/29/18 11:59	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/29/18 11:59	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/29/18 11:59	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/29/18 11:59	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/29/18 11:59	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/29/18 11:59	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/29/18 11:59	1
Acetone	10	U	10	10	7.0	ug/L		10/29/18 11:59	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		10/29/18 11:59	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/29/18 11:59	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/29/18 11:59	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1

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

Lab Sample ID: MB 680-545250/9
Matrix: Water
Analysis Batch: 545250

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/29/18 11:59	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/29/18 11:59	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/29/18 11:59	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/29/18 11:59	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/29/18 11:59	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/29/18 11:59	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/29/18 11:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/29/18 11:59	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/29/18 11:59	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/29/18 11:59	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/29/18 11:59	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/29/18 11:59	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/29/18 11:59	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/29/18 11:59	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/29/18 11:59	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/29/18 11:59	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/29/18 11:59	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/29/18 11:59	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/29/18 11:59	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/29/18 11:59	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/29/18 11:59	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/29/18 11:59	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/29/18 11:59	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/29/18 11:59	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/29/18 11:59	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/29/18 11:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/29/18 11:59	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/29/18 11:59	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/29/18 11:59	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/29/18 11:59	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/29/18 11:59	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/29/18 11:59	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/29/18 11:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*10/29/18 11:59*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*10/29/18 11:59*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/29/18 11:59*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*10/29/18 11:59*	*1*

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

Lab Sample ID: LCS 680-545250/4
Matrix: Water
Analysis Batch: 545250

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	52.1		ug/L		104	78 - 124
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	55.1		ug/L		110	71 - 121
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 119
1,1-Dichloroethane	50.0	45.5		ug/L		91	77 - 125
1,1-Dichloroethene	50.0	45.8		ug/L		92	71 - 131
1,1-Dichloropropene	50.0	50.3		ug/L		101	79 - 125
1,2,3-Trichlorobenzene	50.0	50.8		ug/L		102	69 - 129
1,2,3-Trichloropropane	50.0	53.5		ug/L		107	73 - 122
1,2,4-Trichlorobenzene	50.0	51.7		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	52.0		ug/L		104	62 - 128
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	45.8		ug/L		92	73 - 128
1,2-Dichloroethene, Total	100	96.1		ug/L		96	79 - 121
1,2-Dichloropropane	50.0	50.3		ug/L		101	78 - 122
1,3,5-Trimethylbenzene	50.0	50.4		ug/L		101	75 - 124
1,3-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119
1,3-Dichloropropane	50.0	50.5		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	52.5		ug/L		105	60 - 139
2-Butanone (MEK)	250	248		ug/L		99	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	252		ug/L		101	57 - 139
4-Chlorotoluene	50.0	50.5		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	53.4		ug/L		107	77 - 127
4-Methyl-2-pentanone (MIBK)	250	255		ug/L		102	67 - 130
Acetone	250	242		ug/L		97	39 - 160
Benzene	50.0	49.5		ug/L		99	79 - 120
Bromobenzene	50.0	50.0		ug/L		100	80 - 120
Bromoform	50.0	45.0		ug/L		90	66 - 130
Bromomethane	50.0	48.4		ug/L		97	53 - 141
Carbon disulfide	50.0	49.6		ug/L		99	64 - 133
Carbon tetrachloride	50.0	47.7		ug/L		95	72 - 136
Chlorobenzene	50.0	50.7		ug/L		101	82 - 118
Chlorobromomethane	50.0	48.5		ug/L		97	78 - 123
Chlorodibromomethane	50.0	50.1		ug/L		100	74 - 126
Chloroethane	50.0	42.8		ug/L		86	60 - 138
Chloroform	50.0	47.7		ug/L		95	79 - 124
Chloromethane	50.0	51.1	M	ug/L		102	50 - 139
cis-1,2-Dichloroethene	50.0	47.0		ug/L		94	78 - 123
cis-1,3-Dichloropropene	50.0	51.1		ug/L		102	75 - 124
Dibromomethane	50.0	49.0		ug/L		98	79 - 123
Dichlorobromomethane	50.0	46.4		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	47.1		ug/L		94	32 - 152
Ethylbenzene	50.0	51.4		ug/L		103	79 - 121
Ethylene Dibromide	50.0	51.5		ug/L		103	75 - 127
Hexachlorobutadiene	50.0	54.5		ug/L		109	66 - 134

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

Lab Sample ID: LCS 680-545250/4
Matrix: Water
Analysis Batch: 545250

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	51.7		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	49.7		ug/L		99	71 - 124
Methylene Chloride	50.0	48.7		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	50.5		ug/L		101	80 - 121
Naphthalene	50.0	53.0		ug/L		106	61 - 128
n-Butylbenzene	50.0	53.4		ug/L		107	75 - 128
N-Propylbenzene	50.0	51.7		ug/L		103	76 - 126
o-Xylene	50.0	49.9		ug/L		100	78 - 122
sec-Butylbenzene	50.0	50.8		ug/L		102	77 - 126
Styrene	50.0	50.7		ug/L		101	78 - 123
tert-Butylbenzene	50.0	50.3		ug/L		101	78 - 124
Tetrachloroethene	50.0	51.8		ug/L		104	74 - 129
Toluene	50.0	49.9		ug/L		100	80 - 121
trans-1,2-Dichloroethene	50.0	49.1		ug/L		98	75 - 124
trans-1,3-Dichloropropene	50.0	49.8		ug/L		100	73 - 127
Trichloroethene	50.0	50.3		ug/L		101	79 - 123
Trichlorofluoromethane	50.0	44.5		ug/L		89	65 - 141
Vinyl acetate	100	112		ug/L		112	54 - 146
Vinyl chloride	50.0	49.8		ug/L		100	58 - 137
Xylenes, Total	100	100		ug/L		100	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 680-545250/5
Matrix: Water
Analysis Batch: 545250

Client Sample 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	52.9		ug/L		106	78 - 124	1	20
1,1,1-Trichloroethane	50.0	48.0		ug/L		96	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.5		ug/L		105	71 - 121	5	20
1,1,2-Trichloroethane	50.0	49.4		ug/L		99	80 - 119	2	20
1,1-Dichloroethane	50.0	48.7		ug/L		97	77 - 125	7	20
1,1-Dichloroethene	50.0	45.9		ug/L		92	71 - 131	0	20
1,1-Dichloropropene	50.0	51.9		ug/L		104	79 - 125	3	20
1,2,3-Trichlorobenzene	50.0	49.7		ug/L		99	69 - 129	2	20
1,2,3-Trichloropropane	50.0	50.7		ug/L		101	73 - 122	5	20
1,2,4-Trichlorobenzene	50.0	51.1		ug/L		102	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	50.5		ug/L		101	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	51.4		ug/L		103	62 - 128	1	20
1,2-Dichlorobenzene	50.0	49.3		ug/L		99	80 - 119	1	20
1,2-Dichloroethane	50.0	45.9		ug/L		92	73 - 128	0	20
1,2-Dichloroethene, Total	100	97.1		ug/L		97	79 - 121	1	20
1,2-Dichloropropane	50.0	49.9		ug/L		100	78 - 122	1	20

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

Lab Sample ID: LCSD 680-545250/5
Matrix: Water
Analysis Batch: 545250

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	51.4		ug/L		103	75 - 124	2	20
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	80 - 119	0	20
1,3-Dichloropropane	50.0	49.0		ug/L		98	80 - 119	3	20
1,4-Dichlorobenzene	50.0	50.5		ug/L		101	79 - 118	0	20
2,2-Dichloropropane	50.0	52.1		ug/L		104	60 - 139	1	20
2-Butanone (MEK)	250	224		ug/L		90	56 - 143	10	20
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122	1	20
2-Hexanone	250	237		ug/L		95	57 - 139	6	20
4-Chlorotoluene	50.0	51.0		ug/L		102	78 - 122	1	20
4-Isopropyltoluene	50.0	53.7		ug/L		107	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	241		ug/L		96	67 - 130	6	20
Acetone	250	227		ug/L		91	39 - 160	6	20
Benzene	50.0	49.2		ug/L		98	79 - 120	1	20
Bromobenzene	50.0	49.3		ug/L		99	80 - 120	1	20
Bromoform	50.0	43.8		ug/L		88	66 - 130	3	20
Bromomethane	50.0	47.9		ug/L		96	53 - 141	1	20
Carbon disulfide	50.0	49.8		ug/L		100	64 - 133	1	20
Carbon tetrachloride	50.0	47.2		ug/L		94	72 - 136	1	20
Chlorobenzene	50.0	50.6		ug/L		101	82 - 118	0	20
Chlorobromomethane	50.0	48.1		ug/L		96	78 - 123	1	20
Chlorodibromomethane	50.0	48.4		ug/L		97	74 - 126	3	20
Chloroethane	50.0	43.0		ug/L		86	60 - 138	1	20
Chloroform	50.0	47.8		ug/L		96	79 - 124	0	20
Chloromethane	50.0	51.5	M	ug/L		103	50 - 139	1	20
cis-1,2-Dichloroethene	50.0	47.0		ug/L		94	78 - 123	0	20
cis-1,3-Dichloropropene	50.0	49.2		ug/L		98	75 - 124	4	20
Dibromomethane	50.0	48.2		ug/L		96	79 - 123	2	20
Dichlorobromomethane	50.0	46.1		ug/L		92	79 - 125	1	20
Dichlorodifluoromethane	50.0	45.3		ug/L		91	32 - 152	4	20
Ethylbenzene	50.0	51.5		ug/L		103	79 - 121	0	20
Ethylene Dibromide	50.0	49.6		ug/L		99	75 - 127	4	20
Hexachlorobutadiene	50.0	53.1		ug/L		106	66 - 134	3	20
Isopropylbenzene	50.0	51.6		ug/L		103	72 - 131	0	20
Methyl tert-butyl ether	50.0	47.8		ug/L		96	71 - 124	4	20
Methylene Chloride	50.0	48.5		ug/L		97	74 - 124	0	20
m-Xylene & p-Xylene	50.0	51.3		ug/L		103	80 - 121	2	20
Naphthalene	50.0	51.0		ug/L		102	61 - 128	4	20
n-Butylbenzene	50.0	53.8		ug/L		108	75 - 128	1	20
N-Propylbenzene	50.0	51.9		ug/L		104	76 - 126	0	20
o-Xylene	50.0	50.5		ug/L		101	78 - 122	1	20
sec-Butylbenzene	50.0	51.7		ug/L		103	77 - 126	2	20
Styrene	50.0	51.4		ug/L		103	78 - 123	1	20
tert-Butylbenzene	50.0	51.7		ug/L		103	78 - 124	3	20
Tetrachloroethene	50.0	52.3		ug/L		105	74 - 129	1	20
Toluene	50.0	49.8		ug/L		100	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	50.1		ug/L		100	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	47.8		ug/L		96	73 - 127	4	20
Trichloroethene	50.0	50.6		ug/L		101	79 - 123	0	20

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

Lab Sample ID: LCSD 680-545250/5
Matrix: Water
Analysis Batch: 545250

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	44.8		ug/L		90	65 - 141	1	20
Vinyl acetate			100	106		ug/L		106	54 - 146	5	20
Vinyl chloride			50.0	49.9		ug/L		100	58 - 137	0	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-544664/12
Matrix: Water
Analysis Batch: 544664

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		10/24/18 12:22	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/24/18 12:22	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		10/24/18 12:22	1
Methane (TCD)	77	U	390	77	39	ug/L		10/24/18 12:22	1

Lab Sample ID: LCS 680-544664/10
Matrix: Water
Analysis Batch: 544664

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	1790		ug/L		93	75 - 125

Lab Sample ID: LCS 680-544664/5
Matrix: Water
Analysis Batch: 544664

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane			277	234		ug/L		85	75 - 125
Ethylene			243	203		ug/L		84	75 - 125
Methane			268	207		ug/L		77	75 - 125

Lab Sample ID: LCSD 680-544664/11
Matrix: Water
Analysis Batch: 544664

Client Sample 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	1780		ug/L		92	75 - 125	1	30

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

Lab Sample ID: LCSD 680-544664/8
Matrix: Water
Analysis Batch: 544664

Client Sample 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			277	227		ug/L		82	75 - 125	3	30
Ethylene			243	196		ug/L		81	75 - 125	3	30
Methane			268	206		ug/L		77	75 - 125	1	30

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 544664

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	0.99	J	288	288		ug/L		99	75 - 125
Ethylene	1.0	U	269	267		ug/L		99	75 - 125

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 544664

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	0.99	J	288	295		ug/L		102	75 - 125	2	30
Ethylene	1.0	U	269	270		ug/L		100	75 - 125	1	30

Lab Sample ID: MB 680-545261/24
Matrix: Water
Analysis Batch: 545261

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		10/29/18 15:02	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/29/18 15:02	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		10/29/18 15:02	1
Methane (TCD)	77	U	390	77	39	ug/L		10/29/18 15:02	1

Lab Sample ID: LCS 680-545261/19
Matrix: Water
Analysis Batch: 545261

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane			288	289		ug/L		100	75 - 125
Ethylene			269	269		ug/L		100	75 - 125
Methane			154	146		ug/L		95	75 - 125

Lab Sample ID: LCS 680-545261/21
Matrix: Water
Analysis Batch: 545261

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)			1920	1890		ug/L		98	75 - 125

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

Lab Sample ID: LCSD 680-545261/20
Matrix: Water
Analysis Batch: 545261

Client Sample 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	267		ug/L		93	75 - 125	8	30
Ethylene	269	249		ug/L		92	75 - 125	8	30
Methane	154	137		ug/L		89	75 - 125	6	30

Lab Sample ID: LCSD 680-545261/22
Matrix: Water
Analysis Batch: 545261

Client Sample 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	2000		ug/L		104	75 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-545561/125
Matrix: Water
Analysis Batch: 545561

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		10/30/18 19:29	1

Lab Sample ID: LCS 680-545561/126
Matrix: Water
Analysis Batch: 545561

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

Lab Sample ID: LCSD 680-545561/127
Matrix: Water
Analysis Batch: 545561

Client Sample 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	0	15

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 545561

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	6.5	J D	100	114	D	mg/L		108	87 - 112

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 545561

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	6.5	J D	100	113	D	mg/L		107	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-544518/1-A
Matrix: Water
Analysis Batch: 545052

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544518

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/25/18 15:13	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/25/18 15:13	1

Lab Sample ID: LCS 680-544518/2-A
Matrix: Water
Analysis Batch: 545052

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544518

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4930		ug/L		99	87 - 115
Manganese	500	516		ug/L		103	90 - 114

Lab Sample ID: MB 680-544723/1-A
Matrix: Water
Analysis Batch: 545052

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544723

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/25/18 15:28	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/25/18 15:28	1

Lab Sample ID: LCS 680-544723/2-A
Matrix: Water
Analysis Batch: 545052

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544723

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5220		ug/L		104	87 - 115
Manganese	500	546		ug/L		109	90 - 114

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 545052

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Dissolved
Prep Batch: 544518

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	140000	J1	5000	140000	4	ug/L		-51	87 - 115
Manganese	6100	J1	500	6290	4	ug/L		42	90 - 114

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 545052

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Dissolved
Prep Batch: 544518

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	140000	J1	5000	140000	4	ug/L		-44	87 - 115	0	20
Manganese	6100	J1	500	6300	4	ug/L		44	90 - 114	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-544512/1-A
Matrix: Water
Analysis Batch: 544751

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544512

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/24/18 13:15	1

Lab Sample ID: LCS 680-544512/2-A
Matrix: Water
Analysis Batch: 544751

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	98.0		ug/L		98	84 - 116

Lab Sample ID: MB 680-544721/1-A
Matrix: Water
Analysis Batch: 544845

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544721

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/24/18 21:50	1

Lab Sample ID: LCS 680-544721/2-A
Matrix: Water
Analysis Batch: 544845

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	109		ug/L		109	84 - 116

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 544751

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Dissolved
Prep Batch: 544512

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	230		100	323		ug/L		88	84 - 116

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 544751

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Dissolved
Prep Batch: 544512

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	230		100	328		ug/L		93	84 - 116	2	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-434438/22
Matrix: Water
Analysis Batch: 434438

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.0224	J	0.10	0.050	0.019	mg/L		10/22/18 18:40	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 280-434438/21
Matrix: Water
Analysis Batch: 434438

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	4.87		mg/L		97	90 - 110

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 434438

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.15	J1	4.00	2.21	J1	mg/L		51	90 - 110

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 434438

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.15	J1	4.00	2.25	J1	mg/L		52	90 - 110	2	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-544277/1
Matrix: Water
Analysis Batch: 544277

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 07:34	1

Lab Sample ID: LCS 680-544277/2
Matrix: Water
Analysis Batch: 544277

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	9.62		mg/L		96	75 - 125

Lab Sample ID: LCSD 680-544277/3
Matrix: Water
Analysis Batch: 544277

Client Sample 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	9.64		mg/L		96	75 - 125	0	30

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 544277

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.0	U	10.0	10.3		mg/L		103	75 - 125

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 544277

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.0	U	10.0	10.3		mg/L		103	75 - 125	0	30

Lab Sample ID: MB 680-544288/1
Matrix: Water
Analysis Batch: 544288

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/22/18 08:35	1

Lab Sample ID: LCS 680-544288/2
Matrix: Water
Analysis Batch: 544288

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	9.80		mg/L		98	75 - 125

Lab Sample ID: LCSD 680-544288/3
Matrix: Water
Analysis Batch: 544288

Client Sample 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	9.78		mg/L		98	75 - 125	0	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-434249/5
Matrix: Water
Analysis Batch: 434249

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.50	U	1.0	0.50	0.16	mg/L		10/19/18 11:36	1

Lab Sample ID: LCS 280-434249/3
Matrix: Water
Analysis Batch: 434249

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	26.3		mg/L		105	88 - 112

Lab Sample ID: LCSD 280-434249/4
Matrix: Water
Analysis Batch: 434249

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Duplicates	25.0	26.3		mg/L		105	88 - 112	0	15

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 280-434876/4
Matrix: Water
Analysis Batch: 434876

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.261	J	1.0	0.50	0.16	mg/L		10/24/18 11:32	1

Lab Sample ID: LCS 280-434876/3
Matrix: Water
Analysis Batch: 434876

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

Lab Sample ID: 680-159359-3 MS
Matrix: Water
Analysis Batch: 434876

Client Sample ID: G6M-04-10A_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	240		2500	2720		mg/L		99	88 - 112

Lab Sample ID: 680-159359-3 MSD
Matrix: Water
Analysis Batch: 434876

Client Sample ID: G6M-04-10A_FAL18
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	240		2500	2760		mg/L		101	88 - 112	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-434367/5
Matrix: Water
Analysis Batch: 434367

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		10/19/18 17:14	1

Lab Sample ID: LCS 280-434367/4
Matrix: Water
Analysis Batch: 434367

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	185		mg/L		93	90 - 110

GC/MS VOA

Analysis Batch: 544987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-4	G6M-04-10X_FAL18	Total/NA	Water	8260B	
680-159359-5	G6M-TB01	Total/NA	Water	8260B	
680-159359-7	G6M-95-19X_FAL18	Total/NA	Water	8260B	
680-159359-8	G6M-95-20X_FAL18	Total/NA	Water	8260B	
680-159359-9	G6M-TB02	Total/NA	Water	8260B	
MB 680-544987/10	Method Blank	Total/NA	Water	8260B	
LCS 680-544987/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-544987/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	8260B	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	8260B	
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	8260B	
MB 680-545027/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545027/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545027/4	Lab Control Sample Dup	Total/NA	Water	8260B	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	8260B	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	8260B	

Analysis Batch: 545250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	8260B	
MB 680-545250/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545250/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545250/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 544664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	RSK-175	
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	RSK-175	
MB 680-544664/12	Method Blank	Total/NA	Water	RSK-175	
LCS 680-544664/10	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-544664/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-544664/11	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-544664/8	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	RSK-175	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	RSK-175	

Analysis Batch: 545261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	RSK-175	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	RSK-175	
MB 680-545261/24	Method Blank	Total/NA	Water	RSK-175	
LCS 680-545261/19	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-545261/21	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-545261/20	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-545261/22	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 545561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	9056A	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	9056A	
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	9056A	
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	9056A	
MB 680-545561/125	Method Blank	Total/NA	Water	9056A	
LCS 680-545561/126	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-545561/127	Lab Control Sample Dup	Total/NA	Water	9056A	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	9056A	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	9056A	

Metals

Prep Batch: 544512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Dissolved	Water	3005A	
680-159359-2	AOC50-DUP03_FAL18	Dissolved	Water	3005A	
680-159359-3	G6M-04-10A_FAL18	Dissolved	Water	3005A	
MB 680-544512/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544512/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-159359-3 MS	G6M-04-10A_FAL18	Dissolved	Water	3005A	
680-159359-3 MSD	G6M-04-10A_FAL18	Dissolved	Water	3005A	

Prep Batch: 544518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Dissolved	Water	3005A	
680-159359-2	AOC50-DUP03_FAL18	Dissolved	Water	3005A	
680-159359-3	G6M-04-10A_FAL18	Dissolved	Water	3005A	
MB 680-544518/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544518/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-159359-3 MS	G6M-04-10A_FAL18	Dissolved	Water	3005A	
680-159359-3 MSD	G6M-04-10A_FAL18	Dissolved	Water	3005A	

Prep Batch: 544721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-6	G6M-13-05X_FAL18	Dissolved	Water	3005A	
680-159359-8	G6M-95-20X_FAL18	Dissolved	Water	3005A	
MB 680-544721/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544721/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 544723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-6	G6M-13-05X_FAL18	Dissolved	Water	3005A	
680-159359-8	G6M-95-20X_FAL18	Dissolved	Water	3005A	
MB 680-544723/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544723/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 544751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-3	G6M-04-10A_FAL18	Dissolved	Water	6020A	544512
MB 680-544512/1-A	Method Blank	Total Recoverable	Water	6020A	544512

Metals (Continued)

Analysis Batch: 544751 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-544512/2-A	Lab Control Sample	Total Recoverable	Water	6020A	544512
680-159359-3 MS	G6M-04-10A_FAL18	Dissolved	Water	6020A	544512
680-159359-3 MSD	G6M-04-10A_FAL18	Dissolved	Water	6020A	544512

Analysis Batch: 544837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Dissolved	Water	6020A	544512
680-159359-2	AOC50-DUP03_FAL18	Dissolved	Water	6020A	544512

Analysis Batch: 544845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-6	G6M-13-05X_FAL18	Dissolved	Water	6020A	544721
680-159359-8	G6M-95-20X_FAL18	Dissolved	Water	6020A	544721
MB 680-544721/1-A	Method Blank	Total Recoverable	Water	6020A	544721
LCS 680-544721/2-A	Lab Control Sample	Total Recoverable	Water	6020A	544721

Analysis Batch: 545052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Dissolved	Water	6010C	544518
680-159359-2	AOC50-DUP03_FAL18	Dissolved	Water	6010C	544518
680-159359-3	G6M-04-10A_FAL18	Dissolved	Water	6010C	544518
680-159359-6	G6M-13-05X_FAL18	Dissolved	Water	6010C	544723
680-159359-8	G6M-95-20X_FAL18	Dissolved	Water	6010C	544723
MB 680-544518/1-A	Method Blank	Total Recoverable	Water	6010C	544518
MB 680-544723/1-A	Method Blank	Total Recoverable	Water	6010C	544723
LCS 680-544518/2-A	Lab Control Sample	Total Recoverable	Water	6010C	544518
LCS 680-544723/2-A	Lab Control Sample	Total Recoverable	Water	6010C	544723
680-159359-3 MS	G6M-04-10A_FAL18	Dissolved	Water	6010C	544518
680-159359-3 MSD	G6M-04-10A_FAL18	Dissolved	Water	6010C	544518

General Chemistry

Analysis Batch: 434249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	9060A	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	9060A	
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	9060A	
MB 280-434249/5	Method Blank	Total/NA	Water	9060A	
LCS 280-434249/3	Lab Control Sample	Total/NA	Water	9060A	
LCSD 280-434249/4	Lab Control Sample Dup	Total/NA	Water	9060A	

Analysis Batch: 434367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	SM 2320B	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	SM 2320B	
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	SM 2320B	
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	SM 2320B	
MB 280-434367/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-434367/4	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 434438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	353.2	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	353.2	
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	353.2	
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	353.2	
MB 280-434438/22	Method Blank	Total/NA	Water	353.2	
LCS 280-434438/21	Lab Control Sample	Total/NA	Water	353.2	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	353.2	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	353.2	

Analysis Batch: 434876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	9060A	
MB 280-434876/4	Method Blank	Total/NA	Water	9060A	
LCS 280-434876/3	Lab Control Sample	Total/NA	Water	9060A	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	9060A	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	9060A	

Analysis Batch: 544277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-1	G6M-07-02X_FAL18	Total/NA	Water	9034	
680-159359-2	AOC50-DUP03_FAL18	Total/NA	Water	9034	
680-159359-3	G6M-04-10A_FAL18	Total/NA	Water	9034	
MB 680-544277/1	Method Blank	Total/NA	Water	9034	
LCS 680-544277/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-544277/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-159359-3 MS	G6M-04-10A_FAL18	Total/NA	Water	9034	
680-159359-3 MSD	G6M-04-10A_FAL18	Total/NA	Water	9034	

Analysis Batch: 544288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159359-6	G6M-13-05X_FAL18	Total/NA	Water	9034	
MB 680-544288/1	Method Blank	Total/NA	Water	9034	
LCS 680-544288/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-544288/3	Lab Control Sample Dup	Total/NA	Water	9034	

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-07-02X_FAL18

Lab Sample ID: 680-159359-1

Date Collected: 10/17/18 10:45

Matrix: Water

Date Received: 10/18/18 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	545027	10/26/18 15:07	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	545261	10/29/18 19:03	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	545561	10/30/18 20:59	SMP	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544518	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545052	10/25/18 18:15	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544512	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			544837	10/24/18 16:33	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434438	10/22/18 18:48	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544277	10/22/18 07:34	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		35			434249	10/19/18 13:05	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			434367	10/19/18 18:47	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: AOC50-DUP03_FAL18

Lab Sample ID: 680-159359-2

Date Collected: 10/17/18 10:55

Matrix: Water

Date Received: 10/18/18 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	545027	10/26/18 15:29	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	545261	10/29/18 19:16	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	545561	10/30/18 21:12	SMP	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544518	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545052	10/25/18 18:20	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544512	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			544837	10/24/18 16:37	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434438	10/22/18 18:50	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544277	10/22/18 07:34	DAM	TAL SAV
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: AOC50-DUP03_FAL18

Lab Sample ID: 680-159359-2
Date Collected: 10/17/18 10:55
Matrix: Water
Date Received: 10/18/18 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		35			434249	10/19/18 13:30	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			434367	10/19/18 19:25	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-10A_FAL18

Lab Sample ID: 680-159359-3
Date Collected: 10/16/18 12:15
Matrix: Water
Date Received: 10/18/18 09:25

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	545027	10/26/18 16:12	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	544664	10/24/18 14:47	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		10	5 mL	5 mL	545561	10/30/18 21:25	SMP	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544518	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545052	10/25/18 16:50	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544512	10/23/18 10:40	AJR	TAL SAV
Dissolved	Analysis	6020A		1			544751	10/24/18 13:23	BJB	TAL SAV
	Instrument ID: ICPMSC									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434438	10/22/18 18:42	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544277	10/22/18 07:34	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		100			434876	10/24/18 12:06	LPL	TAL DEN
	Instrument ID: WC_SHI2									
Total/NA	Analysis	SM 2320B		1			434367	10/19/18 19:15	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-10X_FAL18

Lab Sample ID: 680-159359-4
Date Collected: 10/17/18 12:20
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/26/18 01:13	Y1S	TAL SAV
	Instrument ID: CMSA2									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-TB01

Lab Sample ID: 680-159359-5
Date Collected: 10/16/18 00:00
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/25/18 23:03	Y1S	TAL SAV
	Instrument ID: CMSA2									

Client Sample ID: G6M-13-05X_FAL18

Lab Sample ID: 680-159359-6
Date Collected: 10/16/18 09:30
Matrix: Water
Date Received: 10/18/18 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	545250	10/29/18 16:37	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	544664	10/24/18 15:26	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	545561	10/30/18 22:03	SMP	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544723	10/24/18 12:12	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545052	10/25/18 16:45	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544721	10/24/18 12:12	AJR	TAL SAV
Dissolved	Analysis	6020A		1			544845	10/24/18 22:25	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434438	10/22/18 18:52	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544288	10/22/18 08:35	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5			434249	10/19/18 13:54	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			434367	10/19/18 19:33	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-95-19X_FAL18

Lab Sample ID: 680-159359-7
Date Collected: 10/17/18 08:20
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/26/18 01:34	Y1S	TAL SAV
	Instrument ID: CMSA2									

Client Sample ID: G6M-95-20X_FAL18

Lab Sample ID: 680-159359-8
Date Collected: 10/17/18 09:20
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/26/18 01:56	Y1S	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Client Sample ID: G6M-95-20X_FAL18

Lab Sample ID: 680-159359-8

Date Collected: 10/17/18 09:20
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/26/18 01:56	Y1S	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	544723	10/24/18 12:12	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545052	10/25/18 16:40	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544721	10/24/18 12:12	AJR	TAL SAV
Dissolved	Analysis	6020A		1			544845	10/24/18 22:21	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-TB02

Lab Sample ID: 680-159359-9

Date Collected: 10/17/18 00:00
Matrix: Water
Date Received: 10/18/18 09:25

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	544987	10/25/18 22:41	Y1S	TAL SAV
	Instrument ID: CMSA2									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-01A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Cool to 4°C

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Analytical Test Method					**46**	**47**	**8**	**9**	**9**	**29**	**7**	**5**	**10**				
1	G6M-07-02X_FAL18	WG	10/17/18	1045	B/A	X	X	X	X	X	X	X	X	X	G6M-07-02X	N1	22.50	27.50
2	AOC50-DUP03_FAL18	WG	10/17/18	1055	B/A	X	X	X	X	X	X	X	X	X	FIELDQC	FD1		
3	G6M-04-10A_FAL18	WG	10/16/18	1215	B/A	X	X	X	X	X	X	X	X	X	G6M-04-10A	N1	30.00	40.00
4	G6M-04-10A_FAL18 MS	WG	10/16/18	1215	B/A	X	X	X	X	X	X	X	X	X	G6M-04-10A	MS1	30.00	40.00
5	G6M-04-10A_FAL18 MSD	WG	10/16/18	1215	B/A	X	X	X	X	X	X	X	X	X	G6M-04-10A	SD1	30.00	40.00
6	G6M-04-10X_FAL18	WG	10/17/18	1220	B/A						X				G6M-04-10X	N1	52.00	62.00
7	~~G6M-04-13X_FAL18~~	~~WG~~									~~X~~				~~G6M-04-13X~~	~~N1~~	~~30.00~~	~~40.00~~
8	G6M-TB01	WQ	10/16/18								X				FIELDQC	TB1	0.00	0.00
		Turnaround Time: Routine																

680-159359 Chain of Custody

Relinquished by: *(Signature)*	Date	Time
Brit Cat	10/17/18	1430
	10-17-18	1800

Received by: *(Signature)*	Date	Time
	10-17-18	1430

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

14/18/12 925

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC # 360325-Boston 360325-Boston

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments: Cool to 4°C

Equipment:

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B - Alkalinity	E353.2 Nitrate Nitrite cN	RSK175 - Dissolved Gases	SW6010C / FLDFLT Fe, Mn	SW6020A / FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC		Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1																		
1	G6M-13-05X_FALL8	WG	10/16/18	0930	B/A	X	X	X	X	X	X	X	X	X		G6M-13-05X	N1		
2	G6M-95-19X-FALL8	WG	10/17/18	0820	B/A						X					G6M-95-flX	N1		
3	G6M-95-20X-FALL8	WG	10/17/18	0920	B/A				X	X	X					G6M-95-20X	N1		
4	G6M-TB02	WG	10/17/18								X					FIELDQC	TB2		
5																			
6																			
7																			
8																			
9																			
10																			
Cooler:		**Turn Around Time:** Routine																	

Relinquished by: *(Signature)*	Date	Time
Brett Ross	10/17/18	1430
	10-17-18	1700

Received by: *(Signature)*	Date	Time
	10-17-18	1730

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10/18/18 925

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159359-1

Login Number: 159359
List Number: 1
Creator: Ragnaldsen, Amy E

List Source: 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.	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.	N/A	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / LTM / AOC 50

TestAmerica Job ID: 680-159359-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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TestAmerica Savannah
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Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-159494-1
Client Project/Site: Fort Devens / AOC50

For:
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11/5/2018 4:10:04 PM

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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.

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Job ID: 680-159494-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC50

Report Number: 680-159494-1

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 10/20/2018; 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-04-13X_FAL18 (680-159494-1), G6M-02-08X_FAL18 (680-159494-2), G6M-EB01_FAL18 (680-159494-3), G6M-13-06X_FAL18 (680-159494-4), G6M-04-09X_FAL18 (680-159494-5), G6M-04-15X_FAL18 (680-159494-6) and G6M-TB03_FAL18 (680-159494-7) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/31/2018, 11/01/2018 and 11/02/2018.

The continuing calibration verification (CCV) associated with batch 680-545588 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 680-545781 recovered above the upper control limit for Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The closing calibration verification (CCVC) analyzed in batch 545781 was outside the method criteria for the 12 hour window by 1 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

The continuing calibration verification (CCV) associated with batch 680-545948 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 laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 680-545588 recovered outside control limits for the following analytes: Bromomethane. This analyte was biased high in the LCS/LCSD and was not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-545948 recovered outside control limits for the following analyte(s): Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-545588.

Refer to the QC report for details.

Job ID: 680-159494-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Sample G6M-02-08X_FAL18 (680-159494-2)[10X] 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-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 10/30/2018 and 10/31/2018.

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

METALS (ICP) - DISSOLVED
Samples G6M-02-08X_FAL18 (680-159494-2), G6M-EB01_FAL18 (680-159494-3), G6M-13-06X_FAL18 (680-159494-4), G6M-04-09X_FAL18 (680-159494-5) and G6M-04-15X_FAL18 (680-159494-6) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/24/2018 and analyzed on 10/26/2018.

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

METALS (ICPMS) - DISSOLVED
Samples G6M-02-08X_FAL18 (680-159494-2), G6M-EB01_FAL18 (680-159494-3), G6M-13-06X_FAL18 (680-159494-4), G6M-04-09X_FAL18 (680-159494-5) and G6M-04-15X_FAL18 (680-159494-6) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/24/2018 and analyzed on 10/26/2018.

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

ALKALINITY
Samples G6M-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 10/26/2018.

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

NITRATE-NITRITE AS NITROGEN
Samples G6M-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/24/2018.

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

SULFIDE
Samples G6M-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/25/2018.

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-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 11/01/2018.

Samples G6M-02-08X_FAL18 (680-159494-2)[2X] and G6M-13-06X_FAL18 (680-159494-4)[2X] 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-02-08X_FAL18 (680-159494-2) and G6M-13-06X_FAL18 (680-159494-4) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/25/2018.

Job ID: 680-159494-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Total Organic Carbon - Duplicates was detected in method blank MB 280-435139/4 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 instrument blank for analytical batch 280-434876 contained TOC greater than one-half the reporting limit (RL), and were not re-analyzed because sample result is >10X the CCB. The data have been qualified and reported.

Samples G6M-02-08X_FAL18 (680-159494-2)[5X] and G6M-13-06X_FAL18 (680-159494-4)[3.33X] 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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159494-1	G6M-04-13X_FAL18	Water	10/19/18 12:25	10/20/18 10:27
680-159494-2	G6M-02-08X_FAL18	Water	10/19/18 09:20	10/20/18 10:27
680-159494-3	G6M-EB01_FAL18	Water	10/19/18 12:00	10/20/18 10:27
680-159494-4	G6M-13-06X_FAL18	Water	10/19/18 10:10	10/20/18 10:27
680-159494-5	G6M-04-09X_FAL18	Water	10/19/18 12:50	10/20/18 10:27
680-159494-6	G6M-04-15X_FAL18	Water	10/19/18 11:15	10/20/18 10:27
680-159494-7	G6M-TB03_FAL18	Water	10/19/18 00:00	10/20/18 10:27

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
D	The reported value is from a dilution.

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

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)
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)

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-04-13X_FAL18
Date Collected: 10/19/18 12:25
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:37	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 11:37	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:37	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 11:37	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 11:37	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 11:37	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 11:37	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 11:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 11:37	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:37	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 11:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 11:37	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 11:37	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 11:37	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:37	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 11:37	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 11:37	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:37	1
2-Butanone (MEK)	**8.8**	**J**	10	10	3.4	ug/L		10/31/18 11:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 11:37	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 11:37	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:37	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:37	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/31/18 11:37	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 11:37	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:37	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:37	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:37	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 11:37	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 11:37	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:37	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 11:37	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:37	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 11:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 11:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 11:37	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:37	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 11:37	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/31/18 11:37	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:37	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 11:37	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:37	1

Client Sample ID: G6M-04-13X_FAL18

Lab Sample ID: 680-159494-1

Date Collected: 10/19/18 12:25

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 11:37	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:37	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:37	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 11:37	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 11:37	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 11:37	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:37	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 11:37	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:37	1
Tetrachloroethene	1.0	U M	1.0	1.0	0.74	ug/L		10/31/18 11:37	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:37	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:37	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:37	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 11:37	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:37	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/31/18 11:37*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*10/31/18 11:37*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/31/18 11:37*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/31/18 11:37*	*1*

Client Sample ID: G6M-02-08X_FAL18

Lab Sample ID: 680-159494-2

Date Collected: 10/19/18 09:20

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	10	U	10	10	3.7	ug/L		11/01/18 15:04	10
1,1,1-Trichloroethane	10	U	10	10	3.7	ug/L		11/01/18 15:04	10
1,1,2,2-Tetrachloroethane	10	U	10	10	6.2	ug/L		11/01/18 15:04	10
1,1,2-Trichloroethane	5.0	U	10	5.0	3.3	ug/L		11/01/18 15:04	10
1,1-Dichloroethane	10	U	10	10	3.8	ug/L		11/01/18 15:04	10
1,1-Dichloroethene	10	U	10	10	3.6	ug/L		11/01/18 15:04	10
1,1-Dichloropropene	10	U	10	10	3.4	ug/L		11/01/18 15:04	10
1,2,3-Trichlorobenzene	50	U	50	50	25	ug/L		11/01/18 15:04	10
1,2,3-Trichloropropane	10	U	10	10	3.9	ug/L		11/01/18 15:04	10
1,2,4-Trichlorobenzene	50	U	50	50	25	ug/L		11/01/18 15:04	10
1,2,4-Trimethylbenzene	**5.9**	**J D**	10	10	4.7	ug/L		11/01/18 15:04	10
1,2-Dibromo-3-Chloropropane	20	U	50	20	11	ug/L		11/01/18 15:04	10
1,2-Dichlorobenzene	10	U	10	10	3.7	ug/L		11/01/18 15:04	10
1,2-Dichloroethane	10	U M	10	10	5.0	ug/L		11/01/18 15:04	10
1,2-Dichloroethene, Total	**8.0**	**J D**	20	10	7.4	ug/L		11/01/18 15:04	10
1,2-Dichloropropane	10	U	10	10	6.7	ug/L		11/01/18 15:04	10
1,3,5-Trimethylbenzene	5.0	U	10	5.0	3.1	ug/L		11/01/18 15:04	10
1,3-Dichlorobenzene	10	U	10	10	4.3	ug/L		11/01/18 15:04	10

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-02-08X_FAL18
Date Collected: 10/19/18 09:20
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	10	U	10	10	3.4	ug/L		11/01/18 15:04	10
1,4-Dichlorobenzene	10	U	10	10	4.6	ug/L		11/01/18 15:04	10
2,2-Dichloropropane	10	U	10	10	3.7	ug/L		11/01/18 15:04	10
2-Butanone (MEK)	**77**	**J D M**	100	100	34	ug/L		11/01/18 15:04	10
2-Chlorotoluene	5.0	U	10	5.0	2.7	ug/L		11/01/18 15:04	10
2-Hexanone	50	U	100	50	20	ug/L		11/01/18 15:04	10
4-Chlorotoluene	10	U	10	10	4.5	ug/L		11/01/18 15:04	10
4-Isopropyltoluene	10	U	10	10	4.8	ug/L		11/01/18 15:04	10
4-Methyl-2-pentanone (MIBK)	50	U	100	50	21	ug/L		11/01/18 15:04	10
Acetone	**76**	**J D**	100	100	70	ug/L		11/01/18 15:04	10
Benzene	10	U	10	10	4.3	ug/L		11/01/18 15:04	10
Bromobenzene	10	U	10	10	5.0	ug/L		11/01/18 15:04	10
Bromoform	10	U	10	10	4.3	ug/L		11/01/18 15:04	10
Bromomethane	50	U	50	50	25	ug/L		11/01/18 15:04	10
Carbon disulfide	20	U	20	20	4.3	ug/L		11/01/18 15:04	10
Carbon tetrachloride	5.0	U	10	5.0	3.3	ug/L		11/01/18 15:04	10
Chlorobenzene	5.0	U	10	5.0	2.6	ug/L		11/01/18 15:04	10
Chlorobromomethane	10	U	10	10	4.5	ug/L		11/01/18 15:04	10
Chlorodibromomethane	5.0	U	10	5.0	3.2	ug/L		11/01/18 15:04	10
Chloroethane	50	U	50	50	25	ug/L		11/01/18 15:04	10
Chloroform	10	U	10	10	5.0	ug/L		11/01/18 15:04	10
Chloromethane	10	U	10	10	4.0	ug/L		11/01/18 15:04	10
cis-1,2-Dichloroethene	**8.0**	**J D**	10	10	4.1	ug/L		11/01/18 15:04	10
cis-1,3-Dichloropropene	10	U	10	10	4.0	ug/L		11/01/18 15:04	10
Dibromomethane	10	U	10	10	3.5	ug/L		11/01/18 15:04	10
Dichlorobromomethane	10	U	10	10	4.4	ug/L		11/01/18 15:04	10
Dichlorodifluoromethane	10	U	10	10	6.0	ug/L		11/01/18 15:04	10
Ethylbenzene	5.0	U	10	5.0	3.3	ug/L		11/01/18 15:04	10
Ethylene Dibromide	10	U	10	10	4.4	ug/L		11/01/18 15:04	10
Hexachlorobutadiene	50	U	50	50	25	ug/L		11/01/18 15:04	10
Isopropylbenzene	10	U	10	10	3.5	ug/L		11/01/18 15:04	10
Methyl tert-butyl ether	5.0	U	100	5.0	3.0	ug/L		11/01/18 15:04	10
Methylene Chloride	50	U	50	50	25	ug/L		11/01/18 15:04	10
m-Xylene & p-Xylene	10	U	10	10	3.5	ug/L		11/01/18 15:04	10
Naphthalene	50	U	50	50	25	ug/L		11/01/18 15:04	10
n-Butylbenzene	10	U	10	10	4.7	ug/L		11/01/18 15:04	10
N-Propylbenzene	10	U	10	10	3.8	ug/L		11/01/18 15:04	10
o-Xylene	5.0	U	10	5.0	2.3	ug/L		11/01/18 15:04	10
sec-Butylbenzene	10	U	10	10	4.2	ug/L		11/01/18 15:04	10
Styrene	5.0	U	10	5.0	2.7	ug/L		11/01/18 15:04	10
tert-Butylbenzene	10	U	10	10	4.5	ug/L		11/01/18 15:04	10
Tetrachloroethene	10	U	10	10	7.4	ug/L		11/01/18 15:04	10
Toluene	**1400**	**D**	10	10	4.8	ug/L		11/01/18 15:04	10
trans-1,2-Dichloroethene	10	U	10	10	3.7	ug/L		11/01/18 15:04	10
trans-1,3-Dichloropropene	10	U	10	10	4.2	ug/L		11/01/18 15:04	10
Trichloroethene	10	U	10	10	4.8	ug/L		11/01/18 15:04	10
Trichlorofluoromethane	10	U	10	10	4.2	ug/L		11/01/18 15:04	10
Vinyl acetate	20	U Q	20	20	8.1	ug/L		11/01/18 15:04	10
Vinyl chloride	10	U	10	10	5.0	ug/L		11/01/18 15:04	10

Client Sample ID: G6M-02-08X_FAL18

Lab Sample ID: 680-159494-2
Date Collected: 10/19/18 09:20
Matrix: Water
Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	5.0	U	20	5.0	2.3	ug/L		11/01/18 15:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*11/01/18 15:04*	*10*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/01/18 15:04*	*10*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/01/18 15:04*	*10*
Toluene-d8 (Surr)	*89*		*89 - 112*		*11/01/18 15:04*	*10*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		10/30/18 13:42	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/30/18 13:42	1
Methane (TCD)	**38000**		390	77	39	ug/L		10/30/18 13:42	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	2.0	U	2.0	2.0	0.80	mg/L		11/01/18 15:43	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**240000**		50	50	17	ug/L		10/26/18 18:40	1
Manganese	**1400**		10	3.0	1.0	ug/L		10/26/18 18:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**300**		3.0	3.0	1.5	ug/L		10/26/18 13:55	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.23**		0.10	0.050	0.019	mg/L		10/24/18 21:32	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/25/18 03:50	1
Total Organic Carbon - Duplicates	**110**		5.0	2.5	0.78	mg/L		10/25/18 23:38	5
Alkalinity	**190**		5.0	5.0	1.1	mg/L		10/26/18 00:28	1

Client Sample ID: G6M-EB01_FAL18

Lab Sample ID: 680-159494-3
Date Collected: 10/19/18 12:00
Matrix: Water
Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:53	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:53	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 10:53	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:53	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 10:53	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 10:53	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 10:53	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 10:53	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 10:53	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-EB01_FAL18
Date Collected: 10/19/18 12:00
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 10:53	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:53	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 10:53	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 10:53	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 10:53	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 10:53	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:53	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 10:53	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 10:53	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:53	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/31/18 10:53	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 10:53	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 10:53	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:53	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:53	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/31/18 10:53	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 10:53	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:53	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:53	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:53	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 10:53	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:53	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 10:53	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:53	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 10:53	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:53	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 10:53	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 10:53	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 10:53	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:53	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 10:53	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/31/18 10:53	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:53	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 10:53	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:53	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 10:53	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:53	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:53	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 10:53	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 10:53	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 10:53	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:53	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 10:53	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:53	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/31/18 10:53	1

Client Sample ID: G6M-EB01_FAL18

Lab Sample ID: 680-159494-3

Date Collected: 10/19/18 12:00

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:53	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:53	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:53	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:53	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 10:53	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:53	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 10:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/31/18 10:53*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*10/31/18 10:53*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*10/31/18 10:53*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*10/31/18 10:53*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/26/18 18:20	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/26/18 18:20	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 13:32	1

Client Sample ID: G6M-13-06X_FAL18

Lab Sample ID: 680-159494-4

Date Collected: 10/19/18 10:10

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:49	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 10:49	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:49	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:49	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 10:49	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:49	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 10:49	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
1,2,4-Trimethylbenzene	**0.56**	**J**	1.0	1.0	0.47	ug/L		11/02/18 10:49	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 10:49	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:49	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 10:49	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 10:49	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 10:49	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 10:49	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:49	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:49	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 10:49	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-13-06X_FAL18
Date Collected: 10/19/18 10:10
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:49	1
2-Butanone (MEK)	**400**		10	10	3.4	ug/L		11/02/18 10:49	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:49	1
2-Hexanone	**2.6**	**J**	10	5.0	2.0	ug/L		11/02/18 10:49	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:49	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:49	1
4-Methyl-2-pentanone (MIBK)	5.0	U M	10	5.0	2.1	ug/L		11/02/18 10:49	1
Acetone	**79**		10	10	7.0	ug/L		11/02/18 10:49	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 10:49	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:49	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:49	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 10:49	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:49	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 10:49	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:49	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 10:49	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:49	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:49	1
cis-1,2-Dichloroethene	**0.67**	**J**	1.0	1.0	0.41	ug/L		11/02/18 10:49	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:49	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:49	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:49	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		11/02/18 10:49	1
Ethylbenzene	**7.3**		1.0	0.50	0.33	ug/L		11/02/18 10:49	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:49	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:49	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 10:49	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
m-Xylene & p-Xylene	**0.35**	**J**	1.0	1.0	0.35	ug/L		11/02/18 10:49	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:49	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:49	1
N-Propylbenzene	1.0	U M	1.0	1.0	0.38	ug/L		11/02/18 10:49	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 10:49	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:49	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:49	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:49	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 10:49	1
Toluene	**4.7**		1.0	1.0	0.48	ug/L		11/02/18 10:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:49	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:49	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:49	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:49	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 10:49	1
Vinyl chloride	**1.2**		1.0	1.0	0.50	ug/L		11/02/18 10:49	1
Xylenes, Total	**0.35**	**J**	2.0	0.50	0.23	ug/L		11/02/18 10:49	1

Client Sample ID: G6M-13-06X_FAL18

Lab Sample ID: 680-159494-4

Date Collected: 10/19/18 10:10

Matrix: Water

Date Received: 10/20/18 10:27

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/02/18 10:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/02/18 10:49*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/02/18 10:49*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/02/18 10:49*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**12**		1.1	1.1	0.55	ug/L		10/31/18 11:58	1
Ethylene	**18**		1.0	1.0	0.50	ug/L		10/31/18 11:58	1
Methane (TCD)	**17000**		390	77	39	ug/L		10/31/18 11:58	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	2.0	U	2.0	2.0	0.80	mg/L		11/01/18 16:02	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**220000**		50	50	17	ug/L		10/26/18 18:30	1
Manganese	**5300**		10	3.0	1.0	ug/L		10/26/18 18:30	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**400**		3.0	3.0	1.5	ug/L		10/26/18 13:47	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.18**		0.10	0.050	0.019	mg/L		10/24/18 21:30	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/25/18 03:50	1
Total Organic Carbon - Duplicates	**120**		3.3	1.7	0.52	mg/L		10/25/18 23:55	3.33
Alkalinity	**480**		5.0	5.0	1.1	mg/L		10/26/18 00:22	1

Client Sample ID: G6M-04-09X_FAL18

Lab Sample ID: 680-159494-5

Date Collected: 10/19/18 12:50

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 12:42	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 12:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 12:42	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 12:42	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 12:42	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 12:42	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 12:42	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 12:42	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 12:42	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 12:42	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 12:42	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 12:42	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-04-09X_FAL18
Date Collected: 10/19/18 12:50
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 12:42	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 12:42	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 12:42	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 12:42	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 12:42	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 12:42	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 12:42	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/31/18 12:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 12:42	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 12:42	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 12:42	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 12:42	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/31/18 12:42	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 12:42	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 12:42	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 12:42	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 12:42	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 12:42	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 12:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 12:42	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 12:42	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 12:42	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 12:42	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 12:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 12:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 12:42	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 12:42	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 12:42	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/31/18 12:42	1
Ethylbenzene	0.50	U M	1.0	0.50	0.33	ug/L		10/31/18 12:42	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 12:42	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 12:42	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 12:42	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 12:42	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 12:42	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 12:42	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 12:42	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 12:42	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 12:42	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 12:42	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 12:42	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/31/18 12:42	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 12:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 12:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 12:42	1

Client Sample ID: G6M-04-09X_FAL18

Lab Sample ID: 680-159494-5

Date Collected: 10/19/18 12:50

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 12:42	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 12:42	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 12:42	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 12:42	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*10/31/18 12:42*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/31/18 12:42*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/31/18 12:42*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*10/31/18 12:42*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**140000**		50	50	17	ug/L		10/26/18 18:25	1
Manganese	**2600**		10	3.0	1.0	ug/L		10/26/18 18:25	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**330**		3.0	3.0	1.5	ug/L		10/26/18 13:43	1

Client Sample ID: G6M-04-15X_FAL18

Lab Sample ID: 680-159494-6

Date Collected: 10/19/18 11:15

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 13:04	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 13:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 13:04	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 13:04	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 13:04	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 13:04	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 13:04	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 13:04	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 13:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 13:04	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 13:04	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 13:04	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 13:04	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 13:04	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 13:04	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 13:04	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 13:04	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 13:04	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 13:04	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/31/18 13:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 13:04	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-04-15X_FAL18
Date Collected: 10/19/18 11:15
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 13:04	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 13:04	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 13:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U M	10	5.0	2.1	ug/L		10/31/18 13:04	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 13:04	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 13:04	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 13:04	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 13:04	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 13:04	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 13:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 13:04	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 13:04	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 13:04	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 13:04	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 13:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 13:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 13:04	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 13:04	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 13:04	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		10/31/18 13:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 13:04	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 13:04	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 13:04	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 13:04	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 13:04	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 13:04	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 13:04	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 13:04	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 13:04	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 13:04	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 13:04	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 13:04	1
Tetrachloroethene	**1.5**		1.0	1.0	0.74	ug/L		10/31/18 13:04	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 13:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 13:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 13:04	1
Trichloroethene	**0.60**	**J**	1.0	1.0	0.48	ug/L		10/31/18 13:04	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 13:04	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 13:04	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 13:04	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*10/31/18 13:04*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*10/31/18 13:04*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*10/31/18 13:04*	*1*

Client Sample ID: G6M-04-15X_FAL18

Lab Sample ID: 680-159494-6

Date Collected: 10/19/18 11:15

Matrix: Water

Date Received: 10/20/18 10:27

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		89 - 112		10/31/18 13:04	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	11000		50	50	17	ug/L		10/26/18 18:35	1
Manganese	5900		10	3.0	1.0	ug/L		10/26/18 18:35	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	62		3.0	3.0	1.5	ug/L		10/26/18 13:51	1

Client Sample ID: G6M-TB03_FAL18

Lab Sample ID: 680-159494-7

Date Collected: 10/19/18 00:00

Matrix: Water

Date Received: 10/20/18 10:27

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:15	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 11:15	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:15	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 11:15	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 11:15	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 11:15	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 11:15	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 11:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 11:15	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:15	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 11:15	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 11:15	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 11:15	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 11:15	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:15	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 11:15	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 11:15	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:15	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/31/18 11:15	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 11:15	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 11:15	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:15	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/31/18 11:15	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 11:15	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:15	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:15	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 11:15	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 11:15	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-TB03_FAL18
Date Collected: 10/19/18 00:00
Date Received: 10/20/18 10:27

Lab Sample ID: 680-159494-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 11:15	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:15	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 11:15	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:15	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 11:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 11:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 11:15	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:15	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 11:15	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/31/18 11:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 11:15	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 11:15	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:15	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 11:15	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 11:15	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 11:15	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 11:15	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 11:15	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 11:15	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:15	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 11:15	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 11:15	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/31/18 11:15	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 11:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:15	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 11:15	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 11:15	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 11:15	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 11:15	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 11:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*10/31/18 11:15*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*10/31/18 11:15*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*10/31/18 11:15*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*10/31/18 11:15*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159494-1	G6M-04-13X_FAL18	95	102	98	99
680-159494-2	G6M-02-08X_FAL18	90	98	97	89
680-159494-3	G6M-EB01_FAL18	95	103	99	99
680-159494-4	G6M-13-06X_FAL18	92	99	96	98
680-159494-5	G6M-04-09X_FAL18	95	98	96	100
680-159494-6	G6M-04-15X_FAL18	96	101	100	99
680-159494-7	G6M-TB03_FAL18	98	98	98	101
LCS 680-545588/3	Lab Control Sample	97	93	102	104
LCS 680-545781/4	Lab Control Sample	87	102	94	97
LCS 680-545948/4	Lab Control Sample	86	92	97	99
LCSD 680-545588/4	Lab Control Sample Dup	96	95	103	106
LCSD 680-545781/5	Lab Control Sample Dup	84	102	94	98
LCSD 680-545948/5	Lab Control Sample Dup	94	96	103	103
MB 680-545588/9	Method Blank	93	99	96	97
MB 680-545781/9	Method Blank	82	100	90	96
MB 680-545948/9	Method Blank	92	101	99	98

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

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

Lab Sample ID: MB 680-545588/9
Matrix: Water
Analysis Batch: 545588

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:32	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		10/31/18 10:32	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:32	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 10:32	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		10/31/18 10:32	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 10:32	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		10/31/18 10:32	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 10:32	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		10/31/18 10:32	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:32	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		10/31/18 10:32	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		10/31/18 10:32	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		10/31/18 10:32	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		10/31/18 10:32	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:32	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		10/31/18 10:32	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		10/31/18 10:32	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:32	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		10/31/18 10:32	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 10:32	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		10/31/18 10:32	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:32	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		10/31/18 10:32	1
Acetone	10	U	10	10	7.0	ug/L		10/31/18 10:32	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:32	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:32	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		10/31/18 10:32	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		10/31/18 10:32	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		10/31/18 10:32	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:32	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		10/31/18 10:32	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:32	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 10:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		10/31/18 10:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		10/31/18 10:32	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:32	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 10:32	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		10/31/18 10:32	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		10/31/18 10:32	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		10/31/18 10:32	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1

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

Lab Sample ID: MB 680-545588/9
Matrix: Water
Analysis Batch: 545588

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:32	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		10/31/18 10:32	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		10/31/18 10:32	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		10/31/18 10:32	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		10/31/18 10:32	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		10/31/18 10:32	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		10/31/18 10:32	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:32	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		10/31/18 10:32	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		10/31/18 10:32	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		10/31/18 10:32	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		10/31/18 10:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:32	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		10/31/18 10:32	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		10/31/18 10:32	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		10/31/18 10:32	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:32	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		10/31/18 10:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*10/31/18 10:32*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*10/31/18 10:32*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*10/31/18 10:32*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*10/31/18 10:32*	*1*

Lab Sample ID: LCS 680-545588/3
Matrix: Water
Analysis Batch: 545588

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	49.0		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.6		ug/L		99	71 - 121
1,1,2-Trichloroethane	50.0	49.0		ug/L		98	80 - 119
1,1-Dichloroethane	50.0	47.0		ug/L		94	77 - 125
1,1-Dichloroethene	50.0	48.0		ug/L		96	71 - 131
1,1-Dichloropropene	50.0	48.7		ug/L		97	79 - 125
1,2,3-Trichlorobenzene	50.0	42.5		ug/L		85	69 - 129
1,2,3-Trichloropropane	50.0	50.3		ug/L		101	73 - 122
1,2,4-Trichlorobenzene	50.0	44.7		ug/L		89	69 - 130
1,2,4-Trimethylbenzene	50.0	53.0		ug/L		106	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.6		ug/L		87	62 - 128
1,2-Dichlorobenzene	50.0	48.7		ug/L		97	80 - 119
1,2-Dichloroethane	50.0	48.4		ug/L		97	73 - 128
1,2-Dichloroethene, Total	100	95.3		ug/L		95	79 - 121
1,2-Dichloropropane	50.0	48.0		ug/L		96	78 - 122

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

Lab Sample ID: LCS 680-545588/3
Matrix: Water
Analysis Batch: 545588

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	53.4		ug/L		107	75 - 124
1,3-Dichlorobenzene	50.0	48.4		ug/L		97	80 - 119
1,3-Dichloropropane	50.0	48.6		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	47.7		ug/L		95	79 - 118
2,2-Dichloropropane	50.0	47.3		ug/L		95	60 - 139
2-Butanone (MEK)	250	216		ug/L		86	56 - 143
2-Chlorotoluene	50.0	52.3		ug/L		105	79 - 122
2-Hexanone	250	225		ug/L		90	57 - 139
4-Chlorotoluene	50.0	54.5		ug/L		109	78 - 122
4-Isopropyltoluene	50.0	48.7		ug/L		97	77 - 127
4-Methyl-2-pentanone (MIBK)	250	230		ug/L		92	67 - 130
Acetone	250	194		ug/L		78	39 - 160
Benzene	50.0	49.0		ug/L		98	79 - 120
Bromobenzene	50.0	52.0		ug/L		104	80 - 120
Bromoform	50.0	48.0		ug/L		96	66 - 130
Bromomethane	50.0	74.5	Q	ug/L		149	53 - 141
Carbon disulfide	50.0	46.7		ug/L		93	64 - 133
Carbon tetrachloride	50.0	48.5		ug/L		97	72 - 136
Chlorobenzene	50.0	52.5		ug/L		105	82 - 118
Chlorobromomethane	50.0	49.4		ug/L		99	78 - 123
Chlorodibromomethane	50.0	48.9		ug/L		98	74 - 126
Chloroethane	50.0	44.9		ug/L		90	60 - 138
Chloroform	50.0	47.8		ug/L		96	79 - 124
Chloromethane	50.0	43.8		ug/L		88	50 - 139
cis-1,2-Dichloroethene	50.0	48.5		ug/L		97	78 - 123
cis-1,3-Dichloropropene	50.0	48.3		ug/L		97	75 - 124
Dibromomethane	50.0	48.7		ug/L		97	79 - 123
Dichlorobromomethane	50.0	46.5		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	45.2		ug/L		90	32 - 152
Ethylbenzene	50.0	51.4		ug/L		103	79 - 121
Ethylene Dibromide	50.0	48.1		ug/L		96	75 - 127
Hexachlorobutadiene	50.0	44.2		ug/L		88	66 - 134
Isopropylbenzene	50.0	52.6		ug/L		105	72 - 131
Methyl tert-butyl ether	50.0	46.1		ug/L		92	71 - 124
Methylene Chloride	50.0	49.2		ug/L		98	74 - 124
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Naphthalene	50.0	41.9		ug/L		84	61 - 128
n-Butylbenzene	50.0	47.5		ug/L		95	75 - 128
N-Propylbenzene	50.0	53.7		ug/L		107	76 - 126
o-Xylene	50.0	50.6		ug/L		101	78 - 122
sec-Butylbenzene	50.0	53.7		ug/L		107	77 - 126
Styrene	50.0	52.4		ug/L		105	78 - 123
tert-Butylbenzene	50.0	52.2		ug/L		104	78 - 124
Tetrachloroethene	50.0	49.1		ug/L		98	74 - 129
Toluene	50.0	50.6		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	46.8		ug/L		94	75 - 124
trans-1,3-Dichloropropene	50.0	48.0		ug/L		96	73 - 127
Trichloroethene	50.0	46.7		ug/L		93	79 - 123

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

Lab Sample ID: LCS 680-545588/3
Matrix: Water
Analysis Batch: 545588

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	48.7		ug/L		97	65 - 141
Vinyl acetate	100	92.3		ug/L		92	54 - 146
Vinyl chloride	50.0	46.6		ug/L		93	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: LCSD 680-545588/4
Matrix: Water
Analysis Batch: 545588

Client Sample 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	51.9		ug/L		104	78 - 124	2	20
1,1,1-Trichloroethane	50.0	51.3		ug/L		103	74 - 131	5	20
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/L		99	71 - 121	1	20
1,1,2-Trichloroethane	50.0	49.1		ug/L		98	80 - 119	0	20
1,1-Dichloroethane	50.0	47.2		ug/L		94	77 - 125	0	20
1,1-Dichloroethene	50.0	49.8		ug/L		100	71 - 131	4	20
1,1-Dichloropropene	50.0	50.0		ug/L		100	79 - 125	3	20
1,2,3-Trichlorobenzene	50.0	43.8		ug/L		88	69 - 129	3	20
1,2,3-Trichloropropane	50.0	50.3		ug/L		101	73 - 122	0	20
1,2,4-Trichlorobenzene	50.0	45.3		ug/L		91	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	52.7		ug/L		105	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	44.3		ug/L		89	62 - 128	1	20
1,2-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119	2	20
1,2-Dichloroethane	50.0	48.5		ug/L		97	73 - 128	0	20
1,2-Dichloroethene, Total	100	96.4		ug/L		96	79 - 121	1	20
1,2-Dichloropropane	50.0	47.0		ug/L		94	78 - 122	2	20
1,3,5-Trimethylbenzene	50.0	52.8		ug/L		106	75 - 124	1	20
1,3-Dichlorobenzene	50.0	49.4		ug/L		99	80 - 119	2	20
1,3-Dichloropropane	50.0	49.9		ug/L		100	80 - 119	3	20
1,4-Dichlorobenzene	50.0	49.4		ug/L		99	79 - 118	4	20
2,2-Dichloropropane	50.0	48.6	M	ug/L		97	60 - 139	3	20
2-Butanone (MEK)	250	222		ug/L		89	56 - 143	3	20
2-Chlorotoluene	50.0	52.6		ug/L		105	79 - 122	1	20
2-Hexanone	250	229		ug/L		91	57 - 139	2	20
4-Chlorotoluene	50.0	52.4		ug/L		105	78 - 122	4	20
4-Isopropyltoluene	50.0	49.6		ug/L		99	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	233		ug/L		93	67 - 130	1	20
Acetone	250	202		ug/L		81	39 - 160	4	20
Benzene	50.0	49.6		ug/L		99	79 - 120	1	20
Bromobenzene	50.0	52.6		ug/L		105	80 - 120	1	20
Bromoform	50.0	48.8		ug/L		98	66 - 130	2	20
Bromomethane	50.0	82.6	Q	ug/L		165	53 - 141	10	20

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

Lab Sample ID: LCSD 680-545588/4
Matrix: Water
Analysis Batch: 545588

Client Sample 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 disulfide			50.0	46.7		ug/L		93	64 - 133	0	20
Carbon tetrachloride			50.0	49.9		ug/L		100	72 - 136	3	20
Chlorobenzene			50.0	52.2		ug/L		104	82 - 118	1	20
Chlorobromomethane			50.0	48.8		ug/L		98	78 - 123	1	20
Chlorodibromomethane			50.0	49.6		ug/L		99	74 - 126	1	20
Chloroethane			50.0	47.5	M	ug/L		95	60 - 138	6	20
Chloroform			50.0	48.7		ug/L		97	79 - 124	2	20
Chloromethane			50.0	44.4		ug/L		89	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	49.1		ug/L		98	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	48.7		ug/L		97	75 - 124	1	20
Dibromomethane			50.0	48.2		ug/L		96	79 - 123	1	20
Dichlorobromomethane			50.0	46.9		ug/L		94	79 - 125	1	20
Dichlorodifluoromethane			50.0	46.1		ug/L		92	32 - 152	2	20
Ethylbenzene			50.0	51.6		ug/L		103	79 - 121	0	20
Ethylene Dibromide			50.0	49.0		ug/L		98	75 - 127	2	20
Hexachlorobutadiene			50.0	45.4		ug/L		91	66 - 134	3	20
Isopropylbenzene			50.0	53.0		ug/L		106	72 - 131	1	20
Methyl tert-butyl ether			50.0	46.8		ug/L		94	71 - 124	1	20
Methylene Chloride			50.0	51.0		ug/L		102	74 - 124	3	20
m-Xylene & p-Xylene			50.0	51.2		ug/L		102	80 - 121	1	20
Naphthalene			50.0	43.1		ug/L		86	61 - 128	3	20
n-Butylbenzene			50.0	48.7		ug/L		97	75 - 128	2	20
N-Propylbenzene			50.0	53.3		ug/L		107	76 - 126	1	20
o-Xylene			50.0	51.8		ug/L		104	78 - 122	2	20
sec-Butylbenzene			50.0	53.5		ug/L		107	77 - 126	0	20
Styrene			50.0	52.9		ug/L		106	78 - 123	1	20
tert-Butylbenzene			50.0	53.3		ug/L		107	78 - 124	2	20
Tetrachloroethene			50.0	50.4		ug/L		101	74 - 129	3	20
Toluene			50.0	51.9		ug/L		104	80 - 121	3	20
trans-1,2-Dichloroethene			50.0	47.3		ug/L		95	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	48.8		ug/L		98	73 - 127	2	20
Trichloroethene			50.0	48.0		ug/L		96	79 - 123	3	20
Trichlorofluoromethane			50.0	51.1		ug/L		102	65 - 141	5	20
Vinyl acetate			100	92.6		ug/L		93	54 - 146	0	20
Vinyl chloride			50.0	46.6		ug/L		93	58 - 137	0	20
Xylenes, Total			100	103		ug/L		103	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*106*		*89 - 112*

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

Lab Sample ID: MB 680-545781/9
Matrix: Water
Analysis Batch: 545781

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 10:08	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 10:08	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 10:08	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 10:08	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 10:08	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 10:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 10:08	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 10:08	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 10:08	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 10:08	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 10:08	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 10:08	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 10:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 10:08	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 10:08	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 10:08	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 10:08	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 10:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 10:08	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 10:08	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 10:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 10:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 10:08	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 10:08	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 10:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 10:08	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1

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

Lab Sample ID: MB 680-545781/9
Matrix: Water
Analysis Batch: 545781

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 10:08	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 10:08	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 10:08	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 10:08	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 10:08	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 10:08	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 10:08	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 10:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/01/18 10:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/01/18 10:08*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/01/18 10:08*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/01/18 10:08*	*1*

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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	47.1		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.5		ug/L		107	71 - 121
1,1,2-Trichloroethane	50.0	54.1		ug/L		108	80 - 119
1,1-Dichloroethane	50.0	52.3		ug/L		105	77 - 125
1,1-Dichloroethene	50.0	50.4		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	50.9		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 129
1,2,3-Trichloropropane	50.0	51.9		ug/L		104	73 - 122
1,2,4-Trichlorobenzene	50.0	54.7		ug/L		109	69 - 130
1,2,4-Trimethylbenzene	50.0	51.0		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	52.5		ug/L		105	62 - 128
1,2-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	47.9		ug/L		96	73 - 128
1,2-Dichloroethene, Total	100	103		ug/L		103	79 - 121
1,2-Dichloropropane	50.0	56.8		ug/L		114	78 - 122

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

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	75 - 124
1,3-Dichlorobenzene	50.0	51.4		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	52.9		ug/L		106	80 - 119
1,4-Dichlorobenzene	50.0	51.1		ug/L		102	79 - 118
2,2-Dichloropropane	50.0	55.9		ug/L		112	60 - 139
2-Butanone (MEK)	250	271		ug/L		109	56 - 143
2-Chlorotoluene	50.0	51.7		ug/L		103	79 - 122
2-Hexanone	250	273		ug/L		109	57 - 139
4-Chlorotoluene	50.0	52.1		ug/L		104	78 - 122
4-Isopropyltoluene	50.0	52.7		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	277		ug/L		111	67 - 130
Acetone	250	274		ug/L		110	39 - 160
Benzene	50.0	51.9		ug/L		104	79 - 120
Bromobenzene	50.0	51.0		ug/L		102	80 - 120
Bromoform	50.0	54.6		ug/L		109	66 - 130
Bromomethane	50.0	44.5		ug/L		89	53 - 141
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133
Carbon tetrachloride	50.0	47.2		ug/L		94	72 - 136
Chlorobenzene	50.0	49.2		ug/L		98	82 - 118
Chlorobromomethane	50.0	47.1		ug/L		94	78 - 123
Chlorodibromomethane	50.0	49.4		ug/L		99	74 - 126
Chloroethane	50.0	48.2		ug/L		96	60 - 138
Chloroform	50.0	48.9		ug/L		98	79 - 124
Chloromethane	50.0	51.9		ug/L		104	50 - 139
cis-1,2-Dichloroethene	50.0	52.5		ug/L		105	78 - 123
cis-1,3-Dichloropropene	50.0	56.2		ug/L		112	75 - 124
Dibromomethane	50.0	50.1		ug/L		100	79 - 123
Dichlorobromomethane	50.0	50.5		ug/L		101	79 - 125
Dichlorodifluoromethane	50.0	45.9		ug/L		92	32 - 152
Ethylbenzene	50.0	51.3		ug/L		103	79 - 121
Ethylene Dibromide	50.0	51.7		ug/L		103	75 - 127
Hexachlorobutadiene	50.0	54.0		ug/L		108	66 - 134
Isopropylbenzene	50.0	51.5		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	50.5		ug/L		101	71 - 124
Methylene Chloride	50.0	52.0		ug/L		104	74 - 124
m-Xylene & p-Xylene	50.0	51.5		ug/L		103	80 - 121
Naphthalene	50.0	54.3		ug/L		109	61 - 128
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128
N-Propylbenzene	50.0	52.1		ug/L		104	76 - 126
o-Xylene	50.0	51.4		ug/L		103	78 - 122
sec-Butylbenzene	50.0	51.3		ug/L		103	77 - 126
Styrene	50.0	53.9		ug/L		108	78 - 123
tert-Butylbenzene	50.0	51.0		ug/L		102	78 - 124
Tetrachloroethene	50.0	51.2		ug/L		102	74 - 129
Toluene	50.0	52.8		ug/L		106	80 - 121
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	55.2		ug/L		110	73 - 127
Trichloroethene	50.0	48.1		ug/L		96	79 - 123

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

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	45.3		ug/L		91	65 - 141
Vinyl acetate	100	137		ug/L		137	54 - 146
Vinyl chloride	50.0	54.5		ug/L		109	58 - 137
Xylenes, Total	100	103		ug/L		103	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: LCSD 680-545781/5
Matrix: Water
Analysis Batch: 545781

Client Sample 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	1	20
1,1,1-Trichloroethane	50.0	47.7		ug/L		95	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/L		105	71 - 121	2	20
1,1,2-Trichloroethane	50.0	51.1		ug/L		102	80 - 119	6	20
1,1-Dichloroethane	50.0	52.1		ug/L		104	77 - 125	0	20
1,1-Dichloroethene	50.0	50.6		ug/L		101	71 - 131	0	20
1,1-Dichloropropene	50.0	51.3		ug/L		103	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	55.1		ug/L		110	69 - 129	3	20
1,2,3-Trichloropropane	50.0	50.4		ug/L		101	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	55.6		ug/L		111	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	52.3		ug/L		105	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	62 - 128	0	20
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 119	0	20
1,2-Dichloroethane	50.0	46.0		ug/L		92	73 - 128	4	20
1,2-Dichloroethene, Total	100	104		ug/L		104	79 - 121	0	20
1,2-Dichloropropane	50.0	55.4		ug/L		111	78 - 122	2	20
1,3,5-Trimethylbenzene	50.0	52.7		ug/L		105	75 - 124	1	20
1,3-Dichlorobenzene	50.0	52.1		ug/L		104	80 - 119	1	20
1,3-Dichloropropane	50.0	50.8		ug/L		102	80 - 119	4	20
1,4-Dichlorobenzene	50.0	51.3		ug/L		103	79 - 118	0	20
2,2-Dichloropropane	50.0	55.1		ug/L		110	60 - 139	1	20
2-Butanone (MEK)	250	253		ug/L		101	56 - 143	7	20
2-Chlorotoluene	50.0	51.9		ug/L		104	79 - 122	0	20
2-Hexanone	250	260		ug/L		104	57 - 139	5	20
4-Chlorotoluene	50.0	52.1		ug/L		104	78 - 122	0	20
4-Isopropyltoluene	50.0	54.4		ug/L		109	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)	250	260		ug/L		104	67 - 130	6	20
Acetone	250	257		ug/L		103	39 - 160	6	20
Benzene	50.0	50.8		ug/L		102	79 - 120	2	20
Bromobenzene	50.0	50.3		ug/L		101	80 - 120	1	20
Bromoform	50.0	52.7		ug/L		105	66 - 130	4	20
Bromomethane	50.0	42.3		ug/L		85	53 - 141	5	20

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

Lab Sample ID: LCSD 680-545781/5
Matrix: Water
Analysis Batch: 545781

Client Sample 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 disulfide			50.0	50.2		ug/L		100	64 - 133	1	20
Carbon tetrachloride			50.0	47.6		ug/L		95	72 - 136	1	20
Chlorobenzene			50.0	49.2		ug/L		98	82 - 118	0	20
Chlorobromomethane			50.0	46.2		ug/L		92	78 - 123	2	20
Chlorodibromomethane			50.0	46.7		ug/L		93	74 - 126	6	20
Chloroethane			50.0	48.5		ug/L		97	60 - 138	1	20
Chloroform			50.0	48.6		ug/L		97	79 - 124	1	20
Chloromethane			50.0	51.9		ug/L		104	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	52.6		ug/L		105	78 - 123	0	20
cis-1,3-Dichloropropene			50.0	54.2		ug/L		108	75 - 124	4	20
Dibromomethane			50.0	48.1		ug/L		96	79 - 123	4	20
Dichlorobromomethane			50.0	49.2		ug/L		98	79 - 125	2	20
Dichlorodifluoromethane			50.0	45.6		ug/L		91	32 - 152	1	20
Ethylbenzene			50.0	51.7		ug/L		103	79 - 121	1	20
Ethylene Dibromide			50.0	49.1		ug/L		98	75 - 127	5	20
Hexachlorobutadiene			50.0	55.6		ug/L		111	66 - 134	3	20
Isopropylbenzene			50.0	51.9		ug/L		104	72 - 131	1	20
Methyl tert-butyl ether			50.0	48.7		ug/L		97	71 - 124	4	20
Methylene Chloride			50.0	50.8		ug/L		102	74 - 124	2	20
m-Xylene & p-Xylene			50.0	52.1		ug/L		104	80 - 121	1	20
Naphthalene			50.0	55.2		ug/L		110	61 - 128	2	20
n-Butylbenzene			50.0	55.3		ug/L		111	75 - 128	4	20
N-Propylbenzene			50.0	53.1		ug/L		106	76 - 126	2	20
o-Xylene			50.0	51.9		ug/L		104	78 - 122	1	20
sec-Butylbenzene			50.0	52.3		ug/L		105	77 - 126	2	20
Styrene			50.0	53.3		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	53.1		ug/L		106	78 - 124	4	20
Tetrachloroethene			50.0	51.1		ug/L		102	74 - 129	0	20
Toluene			50.0	52.2		ug/L		104	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	51.0		ug/L		102	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	53.2		ug/L		106	73 - 127	4	20
Trichloroethene			50.0	48.7		ug/L		97	79 - 123	1	20
Trichlorofluoromethane			50.0	45.7		ug/L		91	65 - 141	1	20
Vinyl acetate			100	132		ug/L		132	54 - 146	3	20
Vinyl chloride			50.0	54.4		ug/L		109	58 - 137	0	20
Xylenes, Total			100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

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

Lab Sample ID: MB 680-545948/9
Matrix: Water
Analysis Batch: 545948

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 09:44	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 09:44	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 09:44	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 09:44	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 09:44	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 09:44	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 09:44	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 09:44	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 09:44	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 09:44	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 09:44	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 09:44	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 09:44	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 09:44	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 09:44	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 09:44	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 09:44	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 09:44	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 09:44	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 09:44	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 09:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 09:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 09:44	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 09:44	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 09:44	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 09:44	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1

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

Lab Sample ID: MB 680-545948/9
Matrix: Water
Analysis Batch: 545948

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 09:44	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 09:44	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 09:44	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 09:44	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 09:44	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 09:44	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 09:44	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 09:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/02/18 09:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 09:44*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 09:44*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/02/18 09:44*	*1*

Lab Sample ID: LCS 680-545948/4
Matrix: Water
Analysis Batch: 545948

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	48.4		ug/L		97	78 - 124
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.1		ug/L		94	71 - 121
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 119
1,1-Dichloroethane	50.0	45.0		ug/L		90	77 - 125
1,1-Dichloroethene	50.0	45.9		ug/L		92	71 - 131
1,1-Dichloropropene	50.0	46.2		ug/L		92	79 - 125
1,2,3-Trichlorobenzene	50.0	44.5		ug/L		89	69 - 129
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	73 - 122
1,2,4-Trichlorobenzene	50.0	44.9		ug/L		90	69 - 130
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.6		ug/L		87	62 - 128
1,2-Dichlorobenzene	50.0	47.1		ug/L		94	80 - 119
1,2-Dichloroethane	50.0	44.6		ug/L		89	73 - 128
1,2-Dichloroethene, Total	100	90.2		ug/L		90	79 - 121
1,2-Dichloropropane	50.0	44.5		ug/L		89	78 - 122

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

Lab Sample ID: LCS 680-545948/4
Matrix: Water
Analysis Batch: 545948

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	49.8		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 119
1,3-Dichloropropane	50.0	46.0		ug/L		92	80 - 119
1,4-Dichlorobenzene	50.0	47.4		ug/L		95	79 - 118
2,2-Dichloropropane	50.0	46.4	M	ug/L		93	60 - 139
2-Butanone (MEK)	250	210		ug/L		84	56 - 143
2-Chlorotoluene	50.0	50.3		ug/L		101	79 - 122
2-Hexanone	250	214		ug/L		86	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	47.8		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	250	221		ug/L		88	67 - 130
Acetone	250	205		ug/L		82	39 - 160
Benzene	50.0	46.8		ug/L		94	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	46.6		ug/L		93	66 - 130
Bromomethane	50.0	76.7	Q	ug/L		153	53 - 141
Carbon disulfide	50.0	43.1		ug/L		86	64 - 133
Carbon tetrachloride	50.0	46.9		ug/L		94	72 - 136
Chlorobenzene	50.0	50.3		ug/L		101	82 - 118
Chlorobromomethane	50.0	42.4		ug/L		85	78 - 123
Chlorodibromomethane	50.0	46.9		ug/L		94	74 - 126
Chloroethane	50.0	42.1	M	ug/L		84	60 - 138
Chloroform	50.0	45.8		ug/L		92	79 - 124
Chloromethane	50.0	39.3		ug/L		79	50 - 139
cis-1,2-Dichloroethene	50.0	46.0		ug/L		92	78 - 123
cis-1,3-Dichloropropene	50.0	45.9		ug/L		92	75 - 124
Dibromomethane	50.0	46.0		ug/L		92	79 - 123
Dichlorobromomethane	50.0	45.4		ug/L		91	79 - 125
Dichlorodifluoromethane	50.0	36.7	M	ug/L		73	32 - 152
Ethylbenzene	50.0	49.6		ug/L		99	79 - 121
Ethylene Dibromide	50.0	46.9		ug/L		94	75 - 127
Hexachlorobutadiene	50.0	45.0		ug/L		90	66 - 134
Isopropylbenzene	50.0	50.8		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	43.5		ug/L		87	71 - 124
Methylene Chloride	50.0	44.2		ug/L		88	74 - 124
m-Xylene & p-Xylene	50.0	48.7		ug/L		97	80 - 121
Naphthalene	50.0	42.4		ug/L		85	61 - 128
n-Butylbenzene	50.0	47.1		ug/L		94	75 - 128
N-Propylbenzene	50.0	51.5		ug/L		103	76 - 126
o-Xylene	50.0	49.7		ug/L		99	78 - 122
sec-Butylbenzene	50.0	51.4		ug/L		103	77 - 126
Styrene	50.0	50.0		ug/L		100	78 - 123
tert-Butylbenzene	50.0	50.2		ug/L		100	78 - 124
Tetrachloroethene	50.0	48.8		ug/L		98	74 - 129
Toluene	50.0	48.0		ug/L		96	80 - 121
trans-1,2-Dichloroethene	50.0	44.2		ug/L		88	75 - 124
trans-1,3-Dichloropropene	50.0	44.4		ug/L		89	73 - 127
Trichloroethene	50.0	46.1		ug/L		92	79 - 123

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

Lab Sample ID: LCS 680-545948/4
Matrix: Water
Analysis Batch: 545948

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	46.7		ug/L		93	65 - 141
Vinyl acetate	100	86.7		ug/L		87	54 - 146
Vinyl chloride	50.0	42.1		ug/L		84	58 - 137
Xylenes, Total	100	98.4		ug/L		98	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: LCSD 680-545948/5
Matrix: Water
Analysis Batch: 545948

Client Sample 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	50.9		ug/L		102	78 - 124	5	20
1,1,1-Trichloroethane	50.0	48.8		ug/L		98	74 - 131	3	20
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	71 - 121	6	20
1,1,2-Trichloroethane	50.0	49.4		ug/L		99	80 - 119	7	20
1,1-Dichloroethane	50.0	46.0		ug/L		92	77 - 125	2	20
1,1-Dichloroethene	50.0	47.7		ug/L		95	71 - 131	4	20
1,1-Dichloropropene	50.0	48.2		ug/L		96	79 - 125	4	20
1,2,3-Trichlorobenzene	50.0	46.8		ug/L		94	69 - 129	5	20
1,2,3-Trichloropropane	50.0	51.2		ug/L		102	73 - 122	9	20
1,2,4-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 130	6	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	45.8		ug/L		92	62 - 128	5	20
1,2-Dichlorobenzene	50.0	50.0		ug/L		100	80 - 119	6	20
1,2-Dichloroethane	50.0	48.2		ug/L		96	73 - 128	8	20
1,2-Dichloroethene, Total	100	93.9		ug/L		94	79 - 121	4	20
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 122	9	20
1,3,5-Trimethylbenzene	50.0	52.3		ug/L		105	75 - 124	5	20
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119	4	20
1,3-Dichloropropane	50.0	49.1		ug/L		98	80 - 119	6	20
1,4-Dichlorobenzene	50.0	49.1		ug/L		98	79 - 118	3	20
2,2-Dichloropropane	50.0	46.7	M	ug/L		93	60 - 139	1	20
2-Butanone (MEK)	250	229		ug/L		92	56 - 143	9	20
2-Chlorotoluene	50.0	52.1		ug/L		104	79 - 122	4	20
2-Hexanone	250	234		ug/L		94	57 - 139	9	20
4-Chlorotoluene	50.0	53.4		ug/L		107	78 - 122	4	20
4-Isopropyltoluene	50.0	48.9		ug/L		98	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	238		ug/L		95	67 - 130	7	20
Acetone	250	223		ug/L		89	39 - 160	8	20
Benzene	50.0	48.3		ug/L		97	79 - 120	3	20
Bromobenzene	50.0	53.8		ug/L		108	80 - 120	7	20
Bromoform	50.0	49.4		ug/L		99	66 - 130	6	20
Bromomethane	50.0	82.1	Q	ug/L		164	53 - 141	7	20

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

Lab Sample ID: LCSD 680-545948/5
Matrix: Water
Analysis Batch: 545948

Client Sample 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 disulfide			50.0	44.4		ug/L		89	64 - 133	3	20
Carbon tetrachloride			50.0	47.4		ug/L		95	72 - 136	1	20
Chlorobenzene			50.0	51.8		ug/L		104	82 - 118	3	20
Chlorobromomethane			50.0	47.4		ug/L		95	78 - 123	11	20
Chlorodibromomethane			50.0	49.6		ug/L		99	74 - 126	5	20
Chloroethane			50.0	43.6	M	ug/L		87	60 - 138	4	20
Chloroform			50.0	48.3		ug/L		97	79 - 124	5	20
Chloromethane			50.0	40.8		ug/L		82	50 - 139	4	20
cis-1,2-Dichloroethene			50.0	48.2		ug/L		96	78 - 123	5	20
cis-1,3-Dichloropropene			50.0	49.6		ug/L		99	75 - 124	8	20
Dibromomethane			50.0	48.8		ug/L		98	79 - 123	6	20
Dichlorobromomethane			50.0	47.8		ug/L		96	79 - 125	5	20
Dichlorodifluoromethane			50.0	38.2		ug/L		76	32 - 152	4	20
Ethylbenzene			50.0	51.2		ug/L		102	79 - 121	3	20
Ethylene Dibromide			50.0	50.6		ug/L		101	75 - 127	8	20
Hexachlorobutadiene			50.0	45.9		ug/L		92	66 - 134	2	20
Isopropylbenzene			50.0	52.5		ug/L		105	72 - 131	3	20
Methyl tert-butyl ether			50.0	47.3		ug/L		95	71 - 124	8	20
Methylene Chloride			50.0	48.4		ug/L		97	74 - 124	9	20
m-Xylene & p-Xylene			50.0	50.9		ug/L		102	80 - 121	4	20
Naphthalene			50.0	45.2		ug/L		90	61 - 128	6	20
n-Butylbenzene			50.0	47.9		ug/L		96	75 - 128	2	20
N-Propylbenzene			50.0	53.0		ug/L		106	76 - 126	3	20
o-Xylene			50.0	50.7		ug/L		101	78 - 122	2	20
sec-Butylbenzene			50.0	53.1		ug/L		106	77 - 126	3	20
Styrene			50.0	52.4		ug/L		105	78 - 123	5	20
tert-Butylbenzene			50.0	52.3		ug/L		105	78 - 124	4	20
Tetrachloroethene			50.0	50.5		ug/L		101	74 - 129	3	20
Toluene			50.0	50.3		ug/L		101	80 - 121	5	20
trans-1,2-Dichloroethene			50.0	45.8		ug/L		92	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	48.1		ug/L		96	73 - 127	8	20
Trichloroethene			50.0	46.9		ug/L		94	79 - 123	2	20
Trichlorofluoromethane			50.0	47.8		ug/L		96	65 - 141	2	20
Vinyl acetate			100	93.4		ug/L		93	54 - 146	7	20
Vinyl chloride			50.0	43.3		ug/L		87	58 - 137	3	20
Xylenes, Total			100	102		ug/L		102	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-545425/8
Matrix: Water
Analysis Batch: 545425

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		10/30/18 11:10	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/30/18 11:10	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		10/30/18 11:10	1
Methane (TCD)	77	U	390	77	39	ug/L		10/30/18 11:10	1

Lab Sample ID: LCS 680-545425/3
Matrix: Water
Analysis Batch: 545425

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	75 - 125
Ethylene	269	248		ug/L		92	75 - 125
Methane	154	136		ug/L		89	75 - 125

Lab Sample ID: LCS 680-545425/6
Matrix: Water
Analysis Batch: 545425

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	1980		ug/L		103	75 - 125

Lab Sample ID: LCSD 680-545425/4
Matrix: Water
Analysis Batch: 545425

Client Sample 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	278		ug/L		96	75 - 125	4	30
Ethylene	269	257		ug/L		96	75 - 125	3	30
Methane	154	141		ug/L		92	75 - 125	4	30

Lab Sample ID: LCSD 680-545425/7
Matrix: Water
Analysis Batch: 545425

Client Sample 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	75 - 125	3	30

Lab Sample ID: MB 680-545609/8
Matrix: Water
Analysis Batch: 545609

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		10/31/18 10:20	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		10/31/18 10:20	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		10/31/18 10:20	1
Methane (TCD)	77	U	390	77	39	ug/L		10/31/18 10:20	1

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

Lab Sample ID: LCS 680-545609/3
Matrix: Water
Analysis Batch: 545609

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	282		ug/L		98	75 - 125
Ethylene	269	260		ug/L		97	75 - 125
Methane	154	144		ug/L		93	75 - 125

Lab Sample ID: LCS 680-545609/6
Matrix: Water
Analysis Batch: 545609

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	75 - 125

Lab Sample ID: LCSD 680-545609/4
Matrix: Water
Analysis Batch: 545609

Client Sample 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	266		ug/L		92	75 - 125	6	30
Ethylene	269	249		ug/L		92	75 - 125	4	30
Methane	154	138		ug/L		90	75 - 125	4	30

Lab Sample ID: LCSD 680-545609/7
Matrix: Water
Analysis Batch: 545609

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	1920	1840		ug/L		96	75 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-545808/2
Matrix: Water
Analysis Batch: 545808

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/01/18 08:41	1

Lab Sample ID: LCS 680-545808/3
Matrix: Water
Analysis Batch: 545808

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	10.9		mg/L		109	87 - 112

Lab Sample ID: LCSD 680-545808/4
Matrix: Water
Analysis Batch: 545808

Client Sample 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	10.9		mg/L		109	87 - 112	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-544789/1-A
Matrix: Water
Analysis Batch: 545289

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544789

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/26/18 17:37	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/26/18 17:37	1

Lab Sample ID: LCS 680-544789/2-A
Matrix: Water
Analysis Batch: 545289

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544789

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4900		ug/L		98	87 - 115
Manganese	500	520		ug/L		104	90 - 114

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-544788/1-A
Matrix: Water
Analysis Batch: 545199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544788

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 12:58	1

Lab Sample ID: LCS 680-544788/2-A
Matrix: Water
Analysis Batch: 545199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	99.0		ug/L		99	84 - 116

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-434837/104
Matrix: Water
Analysis Batch: 434837

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		10/24/18 20:58	1

Lab Sample ID: LCS 280-434837/103
Matrix: Water
Analysis Batch: 434837

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	5.05		mg/L		101	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-544806/1
Matrix: Water
Analysis Batch: 544806

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/25/18 03:50	1

Lab Sample ID: LCS 680-544806/2
Matrix: Water
Analysis Batch: 544806

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	9.60		mg/L		96	75 - 125		

Lab Sample ID: LCSD 680-544806/3
Matrix: Water
Analysis Batch: 544806

Client Sample 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	9.77		mg/L		98	75 - 125	2	30

Lab Sample ID: 680-159494-2 DU
Matrix: Water
Analysis Batch: 544806

Client Sample ID: G6M-02-08X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	1.0	U		1.0	U	mg/L				NC	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-435139/4
Matrix: Water
Analysis Batch: 435139

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.190	J	1.0	0.50	0.16	mg/L		10/25/18 16:03	1

Lab Sample ID: LCS 280-435139/3
Matrix: Water
Analysis Batch: 435139

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		98	88 - 112		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-435099/57
Matrix: Water
Analysis Batch: 435099

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		10/25/18 22:52	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 280-435099/56
Matrix: Water
Analysis Batch: 435099

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	205		mg/L		102	90 - 110

GC/MS VOA

Analysis Batch: 545588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-1	G6M-04-13X_FAL18	Total/NA	Water	8260B	
680-159494-3	G6M-EB01_FAL18	Total/NA	Water	8260B	
680-159494-5	G6M-04-09X_FAL18	Total/NA	Water	8260B	
680-159494-6	G6M-04-15X_FAL18	Total/NA	Water	8260B	
680-159494-7	G6M-TB03_FAL18	Total/NA	Water	8260B	
MB 680-545588/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545588/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545588/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	8260B	
MB 680-545781/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545781/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545781/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	8260B	
MB 680-545948/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545948/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545948/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 545425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	RSK-175	
MB 680-545425/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-545425/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-545425/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-545425/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-545425/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 545609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	RSK-175	
MB 680-545609/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-545609/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-545609/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-545609/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-545609/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 545808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	9056A	
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	9056A	
MB 680-545808/2	Method Blank	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 545808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-545808/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-545808/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 544788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Dissolved	Water	3005A	
680-159494-3	G6M-EB01_FAL18	Dissolved	Water	3005A	
680-159494-4	G6M-13-06X_FAL18	Dissolved	Water	3005A	
680-159494-5	G6M-04-09X_FAL18	Dissolved	Water	3005A	
680-159494-6	G6M-04-15X_FAL18	Dissolved	Water	3005A	
MB 680-544788/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544788/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 544789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Dissolved	Water	3005A	
680-159494-3	G6M-EB01_FAL18	Dissolved	Water	3005A	
680-159494-4	G6M-13-06X_FAL18	Dissolved	Water	3005A	
680-159494-5	G6M-04-09X_FAL18	Dissolved	Water	3005A	
680-159494-6	G6M-04-15X_FAL18	Dissolved	Water	3005A	
MB 680-544789/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-544789/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 545199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Dissolved	Water	6020A	544788
680-159494-3	G6M-EB01_FAL18	Dissolved	Water	6020A	544788
680-159494-4	G6M-13-06X_FAL18	Dissolved	Water	6020A	544788
680-159494-5	G6M-04-09X_FAL18	Dissolved	Water	6020A	544788
680-159494-6	G6M-04-15X_FAL18	Dissolved	Water	6020A	544788
MB 680-544788/1-A	Method Blank	Total Recoverable	Water	6020A	544788
LCS 680-544788/2-A	Lab Control Sample	Total Recoverable	Water	6020A	544788

Analysis Batch: 545289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Dissolved	Water	6010C	544789
680-159494-3	G6M-EB01_FAL18	Dissolved	Water	6010C	544789
680-159494-4	G6M-13-06X_FAL18	Dissolved	Water	6010C	544789
680-159494-5	G6M-04-09X_FAL18	Dissolved	Water	6010C	544789
680-159494-6	G6M-04-15X_FAL18	Dissolved	Water	6010C	544789
MB 680-544789/1-A	Method Blank	Total Recoverable	Water	6010C	544789
LCS 680-544789/2-A	Lab Control Sample	Total Recoverable	Water	6010C	544789

General Chemistry

Analysis Batch: 434837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 434837 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	353.2	
MB 280-434837/104	Method Blank	Total/NA	Water	353.2	
LCS 280-434837/103	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 435099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	SM 2320B	
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	SM 2320B	
MB 280-435099/57	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-435099/56	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 435139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	9060A	
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	9060A	
MB 280-435139/4	Method Blank	Total/NA	Water	9060A	
LCS 280-435139/3	Lab Control Sample	Total/NA	Water	9060A	

Analysis Batch: 544806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159494-2	G6M-02-08X_FAL18	Total/NA	Water	9034	
680-159494-4	G6M-13-06X_FAL18	Total/NA	Water	9034	
MB 680-544806/1	Method Blank	Total/NA	Water	9034	
LCS 680-544806/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-544806/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-159494-2 DU	G6M-02-08X_FAL18	Total/NA	Water	9034	

Client Sample ID: G6M-04-13X_FAL18

Lab Sample ID: 680-159494-1

Date Collected: 10/19/18 12:25

Matrix: Water

Date Received: 10/20/18 10:27

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	545588	10/31/18 11:37	UI	TAL SAV
	Instrument ID: CMSA2									

Client Sample ID: G6M-02-08X_FAL18

Lab Sample ID: 680-159494-2

Date Collected: 10/19/18 09:20

Matrix: Water

Date Received: 10/20/18 10:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	545781	11/01/18 15:04	UI	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	545425	10/30/18 13:42	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	545808	11/01/18 15:43	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544789	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545289	10/26/18 18:40	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544788	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 13:55	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434837	10/24/18 21:32	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544806	10/25/18 03:50	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		5			435139	10/25/18 23:38	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			435099	10/26/18 00:28	SGB	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-EB01_FAL18

Lab Sample ID: 680-159494-3

Date Collected: 10/19/18 12:00

Matrix: Water

Date Received: 10/20/18 10:27

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	545588	10/31/18 10:53	UI	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	544789	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545289	10/26/18 18:20	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544788	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 13:32	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-13-06X_FAL18

Lab Sample ID: 680-159494-4

Date Collected: 10/19/18 10:10

Matrix: Water

Date Received: 10/20/18 10:27

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	545948	11/02/18 10:49	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	545609	10/31/18 11:58	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	545808	11/01/18 16:02	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	544789	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545289	10/26/18 18:30	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544788	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 13:47	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	434837	10/24/18 21:30	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544806	10/25/18 03:50	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		3.33			435139	10/25/18 23:55	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			435099	10/26/18 00:22	SGB	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-04-09X_FAL18

Lab Sample ID: 680-159494-5

Date Collected: 10/19/18 12:50

Matrix: Water

Date Received: 10/20/18 10:27

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	545588	10/31/18 12:42	UI	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	544789	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545289	10/26/18 18:25	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544788	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 13:43	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-15X_FAL18

Lab Sample ID: 680-159494-6

Date Collected: 10/19/18 11:15

Matrix: Water

Date Received: 10/20/18 10:27

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	545588	10/31/18 13:04	UI	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	544789	10/24/18 16:19	AJR	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Client Sample ID: G6M-04-15X_FAL18

Lab Sample ID: 680-159494-6

Date Collected: 10/19/18 11:15

Matrix: Water

Date Received: 10/20/18 10:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6010C		1			545289	10/26/18 18:35	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	544788	10/24/18 16:19	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 13:51	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-TB03_FAL18

Lab Sample ID: 680-159494-7

Date Collected: 10/19/18 00:00

Matrix: Water

Date Received: 10/20/18 10:27

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	545588	10/31/18 11:15	UI	TAL SAV
	Instrument ID: CMSA2									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
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360325-Boston

COC # 20181016-03A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

						Analytical Test Method	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs				
	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1						9	9	29				
	Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
1	G6M-04-09X_FAL18	WG	10/19/18				X	X	X	G6M-04-09X	N1	55.00	65.00		1
2	G6M-04-15X_FAL18	WG	10/19/18	1115	B/A		X	X	X	G6M-04-15X	N1	70.00	80.00		1
3	~~G6M-95-19X_FAL18~~	WG							X	G6M-95-19X	N1	48.00	58.00		1
4	~~G6M-95-20X_FAL18~~	WG					X	X	X	G6M-95-20X	N1	0.00	0.00		1
5	~~G6M-TB02~~ G6M-TB03-FAL18	WQ	10/19/18						X	FIELDQC	~~TB2~~ TB3	0.00	0.00		1
		Turnaround Time:													

680-159494 Chain of Custody

1.5(C) 2.1°C

Relinquished by: *(Signature)*	Date	Time
Beth Cate	10/19/18	1423
	10-19-18	1826

Received by: *(Signature)*	Date	Time
	10-19-18	1420

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10-20-18 1027

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181010-02A

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

	Analytical Test Method	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1		46	47	8	9	9	29	7	5	10

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B	E353.2	RSK175	SW6010C	SW6020A	SW8260C	SW9034	SW9056A	SW9060A	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-02-08X_FAL18	WG	10/19/18	0920	B/A	X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00
2	~~G6M-13-05X_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00
3	~~AOC50-DUP04_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	FIELDQC	FD1		
4	~~G6M-13-06X_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00
5	~~G6M-TB04~~ G6M-EB01_FAL18	WQ	10/19/18	1200	B/A				X	X	X				FIELDQC	~~TB4~~ EB01	0.00	0.00
		Turnaround Time:																

1.5(CF) 2.1 °C

Relinquished by: *(Signature)*	Date	Time
[signature]	10/19/18	1423
[signature]	10-19-18	1800

Received by: *(Signature)*	Date	Time
[signature]	10-19-18	1423

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

[signature] 10-20-18 1027

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181010-02A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

Analytical Test Method

Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	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
1	~~G6M-02-08X_FAL18~~	~~WG~~				~~G6M-02-08X~~	~~N1~~	~~60.00~~	~~70.00~~
2	~~G6M-13-05X_FAL18~~	~~WG~~				~~G6M-13-05X~~	~~N1~~	~~45.00~~	~~55.00~~
3	~~AOC50-DUP04_FAL18~~	~~WG~~				~~FIELDQC~~	~~FD1~~		
4	G6M-13-06X_FAL18	WG	10/19/18	1010	OJ	G6M-13-06X	N1	50.00	60.00
5	~~G6M-TB04~~	~~WQ~~				~~FIELDQC~~	TB4	~~0.00~~	~~0.00~~
		Turnaround Time:							

1.5 (cf) 2.1°C

Relinquished by: *(Signature)*	Date	Time
	10/19/18	1310
	10/19/18	1423
	10-19-18	1800

Received by: *(Signature)*	Date	Time
	10/19/18	1310
	10-19-18	1423

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10-2018 1027

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-01A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B - Alkalinity (46)	E353.2 - Nitrite Nitrate as N (47)	RSK175 - Dissolved Gases (8)	SW6010C/FLDFLT - Fe Mn (9)	SW6020A/FLDFLT - As (9)	SW8260C - VOCs (29)	SW9034 - Sulfide (7)	SW9056A - SO4 (5)	SW9060A - TOC (10)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	~~G6M-07-02X_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	~~G6M-07-02X~~	N1	22.50	27.50
2	~~AOC50-DUP03_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	~~FIELDQC~~	FD1		
3	~~G6M-04-10A_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	~~G6M-04-10A~~	N1	30.00	40.00
4	~~G6M-04-10A_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	~~G6M-04-10A~~	MS1	30.00	40.00
5	~~G6M-04-10A_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	~~G6M-04-10A~~	SD1	30.00	40.00
6	~~G6M-04-10X_FAL18~~	~~WG~~									X				~~G6M-04-10X~~	N1	52.00	62.00
7	G6M-04-13X_FAL18	WG	10/19/18	1225	OJ						X				G6M-04-13X	N1	30.00	40.00
8	~~G6M-TB01~~	~~WQ~~									X				~~FIELDQC~~	TB1	0.00	0.00
		Turnaround Time:																

1.5(CF) 2.1°C

Relinquished by: *(Signature)*	Date	Time
	10/19/18	1310
	10/19/18	1423
	10-19-18	850

Received by: *(Signature)*	Date	Time
	10/19/18	1310
	10-19-18	1423

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10-20-18 1027

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181010-02A

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1" 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3" 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1" 250mL, plastic, Cool < 6°C
47	1" 500mL, amber glass, H2SO4; Cool < 6°C
5	1" 125mL plastic, Cool < 6°C
7	2" 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3" 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1" 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Analytical Test Method

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1	46	47	8	9	9	29	7	5	10

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B	E353.2	RSK175	SW6010C	SW6020A	SW8260C	SW9034	SW9056A	SW9060A	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-02-08X_FAL18	WG	10/19/18	0920	B/A	X	X	X	X	X	X	X	X	X	G6M-02-08X	N1	60.00	70.00
2	~~G6M-13-05X_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	G6M-13-05X	N1	45.00	55.00
3	~~AOC50-DUP04_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	FIELDQC	FD1		
4	~~G6M-13-06X_FAL18~~	~~WG~~				X	X	X	X	X	X	X	X	X	G6M-13-06X	N1	50.00	60.00
5	~~G6M-TB04~~ G6M-EB01_FAL18	WQ	10/19/18	1200	B/A				X	X	X				FIELDQC	~~TB4~~ EB01	0.00	0.00
		Turnaround Time:																

1.3° +0.7 129 XFERED BY KD
10-20-18

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[signature]	10/19/18	1423	[signature]	10-19-18	1423
[signature]	10-19-18	1800	[signature]	10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

680-159494 Chain of Custody

Page 1 of 2

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-01A

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Analytical Test Method

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1	**40**	**47**	**8**	**9**	**9**	**29**	**7**	**8**	**10**

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	~~G6M-07-02X_FAL18~~	~~WG~~				~~G6M-07-02X~~	N1	22.50	27.50
2	~~AOC50-DUP03_FAL18~~	~~WG~~				~~FIELDQC~~	FD1		
3	~~G6M-04-10A_FAL18~~	~~WG~~				~~G6M-04-10A~~	N1	30.00	40.00
4	~~G6M-04-10A_FAL18~~	~~WG~~				~~G6M-04-10A~~	~~MS1~~	~~30.00~~	~~40.00~~
5	~~G6M-04-10A_FAL18~~	~~WG~~				~~G6M-04-10A~~	SD1	30.00	40.00
6	~~G6M-04-10X_FAL18~~	~~WG~~				~~G6M-04-10X~~	N1	~~52.00~~	~~62.00~~
7	G6M-04-13X_FAL18	WG	10/19/18	1225	OJ	G6M-04-13X	N1	30.00	40.00
8	~~G6M-TB01~~	~~WQ~~				~~FIELDQC~~	~~TB1~~	~~0.00~~	~~0.00~~
		Turnaround Time:							

Relinquished by: *(Signature)*	Date	Time
	10/19/18	1310
	10/19/18	1423
	10-19-18	1850

Received by: *(Signature)*	Date	Time
	10/19/18	1310
	10-19-18	1423
	10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

360325-Boston

COC # 20181016-03A

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

	Analytical Test Method	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs
Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1		9	9	29

	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
1	G6M-04-09X_FAL18	WG	10/19/18			X	X	X	G6M-04-09X	N1	55.00	65.00		1
2	G6M-04-15X_FAL18	WG	10/19/18	1115	BrA	X	X	X	G6M-04-15X	N1	70.00	80.00		1
3	~~G6M-95-19X_FAL18~~	WG						X	G6M-95-19X	N1	48.00	58.00		1
4	~~G6M-95-20X_FAL18~~	WG				X	X	X	G6M-95-20X	N1	0.00	0.00		1
5	~~G6M-TB02~~ G6M-TB03_FAL18	WQ	10/19/18					X	FIELDQC	~~TB2~~ TB3	0.00	0.00		1
		Turnaround Time:												

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[signature]	10/19/18	1423	[signature]	10-19-18	1420
[signature]	10-19-18	1800			
			[signature]	10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181010-02A

KGS

11/5/2018

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
6	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1

Analytical Test Method

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
	46	47	8	9	9	29	7	6	10

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-02-08X_FAL18	WG	10/19/18	0920	B.A	G6M-02-08X	N1	60.00	70.00
2	~~G6M-13-05X_FAL18~~	~~WG~~				G6M-13-05X	N1	45.00	55.00
3	~~AOC50-DUP04_FAL18~~	~~WG~~				FIELDQC	FD1		
4	~~G6M-13-06X_FAL18~~	~~WG~~				G6M-13-06X	N1	50.00	60.00
5	~~G6M-TB04~~ G6M-EB01_FAL18	WQ	10/19/18	1200	B.A	FIELDQC	~~TB4~~ EB01	0.00	0.00
		Turnaround Time:							

1.3° +0.7 129 XFERED BY KD 10-20-18

Relinquished by: *(Signature)*	Date	Time
Ruth Ortiz	10/19/18	1423
[illegible]	10-19-18	1700

Received by: *(Signature)*	Date	Time
[illegible]	10-19-18	1423
KBT	10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

680-159494 Chain of Custody

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-01A

11/5/2018

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
6	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1

Analytical Test Method

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
	46	47	6	9	9	29	7	6	10
1 ~~G6M-07-02X_FAL18~~ ~~WG~~	X	X	X	X	X	X	X	X	X
2 ~~AOC50-DUP03_FAL18~~ ~~WG~~	X	X	X	X	X	X	X	X	X
3 ~~G6M-04-10A_FAL18~~ ~~WG~~	X	X	X	X	X	X	X	X	X
4 ~~G6M-04-10A_FAL18~~ ~~WG~~	X	X	X	X	X	X	X	X	X
5 ~~G6M-04-10A_FAL18~~ ~~WG~~	X	X	X	X	X	X	X	X	X
6 ~~G6M-04-10X_FAL18~~ ~~WG~~						X			
7 G6M-04-13X_FAL18 WG 10/19/18 1225 OJ						X			
8 ~~G6M-TB01~~ ~~WQ~~						X			
Turnaround Time:									

	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	~~G6M-07-02X~~	N1	~~22.50~~	~~27.50~~
2	~~FIELDQC~~	FB1		
3	~~G6M-04-10A~~	N1	~~30.00~~	~~40.00~~
4	~~G6M-04-10A~~	MS1	~~30.00~~	~~40.00~~
5	~~G6M-04-10A~~	SD1	~~30.00~~	~~40.00~~
6	~~G6M-04-10X~~	N1	~~52.00~~	~~62.00~~
7	G6M-04-13X	N1	30.00	40.00
8	~~FIELDQC~~	~~TB1~~	~~0.00~~	~~0.00~~

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/19/18	1310		10/19/18	1310
	10/19/18	1423		10/19/18	1423
	10-19-18	1850		10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-03A

11/5/2018

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1					9	9	29					
	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
1	G6M-04-09X_FAL18	WG	10/19/18			X	X	X	G6M-04-09X	N1	55.00	65.00		1
2	G6M-04-15X_FAL18	WG	10/19/18	1115	BrA	X	X	X	G6M-04-15X	N1	70.00	80.00		1
3	~~G6M-95-19X_FAL18~~	WG						X	G6M-95-19X	N1	48.00	58.00		1
4	~~G6M-95-20X_FAL18~~	WG				X	X	X	G6M-95-20X	N1	0.00	0.00		1
5	~~G6M-TB02~~ G6M-TB03_FAL18	WQ	10/19/18					X	FIELDQC	~~TB~~ TB3	0.00	0.00		1
		Turnaround Time:												

Relinquished by: *(Signature)*	Date	Time
Beth Curtis	10/19/18	1423
	10-19-18	1826

Received by: *(Signature)*	Date	Time
	10-19-18	1430
	10-20-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181010-02A

KGS

11/5/2018

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
6	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Analytical Test Method

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC
Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018 Area 1	46	47	6	9	9	29	7	6	10

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	~~G6M-02-08X_FAL18~~	~~WG~~				~~G6M-02-08X~~	~~N1~~	~~60.00~~	~~70.00~~
2	~~G6M-13-05X_FAL18~~	~~WG~~				~~G6M-13-05X~~	~~N1~~	~~45.00~~	~~55.00~~
3	~~AOC50-DUP04_FAL18~~	~~WG~~				~~FIELDQC~~	~~FD1~~		
4	G6M-13-06X_FAL18	WG	10/19/18	1010	OJ	G6M-13-06X	N1	50.00	60.00
5	~~G6M-TB04~~	~~WQ~~				~~FIELDQC~~	~~TB4~~	~~0.00~~	~~9.00~~
		Turnaround Time:							

Relinquished by: *(Signature)*	Date	Time
	10/19/18	1310
	10/19/18	1423
	10-19-18	18:-

Received by: *(Signature)*	Date	Time
	10/19/18	1310
	10-19-18	1423

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159494-1

Login Number: 159494

List Source: TestAmerica Savannah

List Number: 1

Creator: Ragnaldsen, Amy E

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.	N/A	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC50

TestAmerica Job ID: 680-159494-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-159877-1
Client Project/Site: Fort Devens / AOC 50 LTM

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
11/8/2018 6:49:09 PM

Jerry Lanier, Project Manager I
(912)250-0281
jerry.lanier@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.

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Job ID: 680-159877-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC 50 LTM

Report Number: 680-159877-1

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 10/27/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.3º C and 4.1º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples G6M-04-14X_FAL18 (680-159877-1), G6M-02-03X_FAL18 (680-159877-2), G6M-97-28X_FAL18 (680-159877-3), G6M-02-04X_FAL18 (680-159877-4), G6M-04-04X_FAL18 (680-159877-5), G6M-EB03 (680-159877-6) and G6M-TB05 (680-159877-7) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/06/2018 and 11/07/2018.

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

DISSOLVED GASES
Samples G6M-02-03X_FAL18 (680-159877-2), G6M-97-28X_FAL18 (680-159877-3) and G6M-02-04X_FAL18 (680-159877-4) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/04/2018 and 11/07/2018.

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

METALS (ICP) - DISSOLVED
Samples G6M-04-14X_FAL18 (680-159877-1), G6M-02-03X_FAL18 (680-159877-2), G6M-97-28X_FAL18 (680-159877-3), G6M-02-04X_FAL18 (680-159877-4), G6M-04-04X_FAL18 (680-159877-5) and G6M-EB03 (680-159877-6) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/31/2018 and analyzed on 11/02/2018.

Manganese failed the recovery criteria low for the MS of sample G6M-04-04X_FAL18MS (680-159877-5) in batch 680-546153.

Iron and Manganese failed the recovery criteria low for the MSD of sample G6M-04-04X_FAL18MSD (680-159877-5) in batch 680-546153.

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 G6M-04-14X_FAL18 (680-159877-1), G6M-02-03X_FAL18 (680-159877-2), G6M-97-28X_FAL18 (680-159877-3), G6M-02-04X_FAL18 (680-159877-4), G6M-04-04X_FAL18 (680-159877-5) and G6M-EB03 (680-159877-6) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 10/31/2018 and analyzed on 11/01/2018.

Job ID: 680-159877-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Arsenic failed the recovery criteria low for the MSD of sample G6M-04-04X_FAL18MSD (680-159877-5) in batch 680-546011.

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.

TOTAL ORGANIC CARBON

Samples G6M-02-03X_FAL18 (680-159877-2), G6M-97-28X_FAL18 (680-159877-3) and G6M-02-04X_FAL18 (680-159877-4) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/01/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-435842/35 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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159877-1	G6M-04-14X_FAL18	Water	10/25/18 10:35	10/27/18 09:55
680-159877-2	G6M-02-03X_FAL18	Water	10/24/18 14:00	10/27/18 09:55
680-159877-3	G6M-97-28X_FAL18	Water	10/26/18 09:00	10/27/18 09:55
680-159877-4	G6M-02-04X_FAL18	Water	10/26/18 10:55	10/27/18 09:55
680-159877-5	G6M-04-04X_FAL18	Water	10/26/18 12:30	10/27/18 09:55
680-159877-6	G6M-EB03	Water	10/26/18 13:00	10/27/18 09:55
680-159877-7	G6M-TB05	Water	10/26/18 00:00	10/27/18 09:55

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
6010C	Metals (ICP)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV

Protocol References:

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

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

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

Metals

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

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation

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)
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)

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-04-14X_FAL18
Date Collected: 10/25/18 10:35
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:19	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 05:19	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:19	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 05:19	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 05:19	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 05:19	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 05:19	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 05:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 05:19	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:19	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 05:19	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 05:19	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 05:19	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 05:19	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:19	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 05:19	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 05:19	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:19	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 05:19	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 05:19	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 05:19	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:19	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 05:19	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 05:19	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:19	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:19	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:19	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 05:19	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:19	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 05:19	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:19	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 05:19	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:19	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 05:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 05:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 05:19	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:19	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 05:19	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 05:19	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:19	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 05:19	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:19	1

Client Sample ID: G6M-04-14X_FAL18

Lab Sample ID: 680-159877-1

Date Collected: 10/25/18 10:35

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 05:19	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:19	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:19	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 05:19	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 05:19	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 05:19	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:19	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 05:19	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:19	1
Tetrachloroethene	**1.1**		1.0	1.0	0.74	ug/L		11/07/18 05:19	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:19	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:19	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:19	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 05:19	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:19	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*11/07/18 05:19*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 05:19*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*11/07/18 05:19*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*11/07/18 05:19*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/02/18 19:16	1
Manganese	**1.7**	**J**	10	3.0	1.0	ug/L		11/02/18 19:16	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**8.1**		3.0	3.0	1.5	ug/L		11/01/18 15:49	1

Client Sample ID: G6M-02-03X_FAL18

Lab Sample ID: 680-159877-2

Date Collected: 10/24/18 14:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 04:56	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 04:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 04:56	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 04:56	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 04:56	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 04:56	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 04:56	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 04:56	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-02-03X_FAL18
Date Collected: 10/24/18 14:00
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 04:56	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 04:56	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 04:56	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 04:56	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 04:56	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 04:56	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 04:56	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 04:56	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 04:56	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 04:56	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 04:56	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 04:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 04:56	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 04:56	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 04:56	1
4-Isopropyltoluene	1.0	U M	1.0	1.0	0.48	ug/L		11/07/18 04:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 04:56	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 04:56	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 04:56	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 04:56	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 04:56	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 04:56	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 04:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 04:56	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 04:56	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 04:56	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 04:56	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 04:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 04:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 04:56	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 04:56	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 04:56	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 04:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 04:56	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 04:56	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 04:56	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 04:56	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 04:56	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 04:56	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 04:56	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 04:56	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 04:56	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 04:56	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 04:56	1

Client Sample ID: G6M-02-03X_FAL18

Lab Sample ID: 680-159877-2

Date Collected: 10/24/18 14:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 04:56	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 04:56	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 04:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 04:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 04:56	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 04:56	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 04:56	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 04:56	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 04:56	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 04:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*11/07/18 04:56*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/07/18 04:56*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/07/18 04:56*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/07/18 04:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/04/18 13:53	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/04/18 13:53	1
Methane (TCD)	**430**		390	77	39	ug/L		11/04/18 13:53	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**180**		50	50	17	ug/L		11/02/18 18:57	1
Manganese	**320**		10	3.0	1.0	ug/L		11/02/18 18:57	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/01/18 15:32	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**1.3**		1.0	0.50	0.16	mg/L		11/01/18 06:04	1

Client Sample ID: G6M-97-28X_FAL18

Lab Sample ID: 680-159877-3

Date Collected: 10/26/18 09:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:42	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 05:42	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:42	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 05:42	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 05:42	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 05:42	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 05:42	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-97-28X_FAL18
Date Collected: 10/26/18 09:00
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 05:42	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 05:42	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:42	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 05:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 05:42	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 05:42	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 05:42	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:42	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 05:42	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 05:42	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:42	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 05:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 05:42	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 05:42	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:42	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:42	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 05:42	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 05:42	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:42	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:42	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 05:42	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 05:42	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 05:42	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:42	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 05:42	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:42	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 05:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 05:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 05:42	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:42	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 05:42	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 05:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 05:42	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 05:42	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:42	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 05:42	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 05:42	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 05:42	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 05:42	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 05:42	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 05:42	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:42	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 05:42	1

Client Sample ID: G6M-97-28X_FAL18

Lab Sample ID: 680-159877-3

Date Collected: 10/26/18 09:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 05:42	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 05:42	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 05:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:42	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 05:42	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 05:42	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 05:42	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 05:42	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*11/07/18 05:42*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/07/18 05:42*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*11/07/18 05:42*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/07/18 05:42*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/07/18 20:19	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 20:19	1
Methane	**210**		0.58	0.58	0.29	ug/L		11/07/18 20:19	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**9500**		50	50	17	ug/L		11/02/18 18:52	1
Manganese	**9500**		10	3.0	1.0	ug/L		11/02/18 18:52	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**92**		3.0	3.0	1.5	ug/L		11/01/18 15:28	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**1.2**		1.0	0.50	0.16	mg/L		11/01/18 06:19	1

Client Sample ID: G6M-02-04X_FAL18

Lab Sample ID: 680-159877-4

Date Collected: 10/26/18 10:55

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:15	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 07:15	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:15	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 07:15	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 07:15	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 07:15	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 07:15	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-02-04X_FAL18
Date Collected: 10/26/18 10:55
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 07:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 07:15	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:15	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 07:15	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 07:15	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 07:15	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 07:15	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:15	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 07:15	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 07:15	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:15	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 07:15	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 07:15	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 07:15	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:15	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 07:15	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 07:15	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:15	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 07:15	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:15	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 07:15	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 07:15	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:15	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 07:15	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 07:15	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 07:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 07:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 07:15	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:15	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 07:15	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 07:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:15	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 07:15	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:15	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 07:15	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:15	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:15	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 07:15	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 07:15	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 07:15	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:15	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 07:15	1

Client Sample ID: G6M-02-04X_FAL18

Lab Sample ID: 680-159877-4

Date Collected: 10/26/18 10:55

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:15	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 07:15	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:15	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:15	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:15	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 07:15	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 07:15	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/07/18 07:15*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 07:15*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*11/07/18 07:15*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/07/18 07:15*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**5.1**		1.1	1.1	0.55	ug/L		11/07/18 20:32	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 20:32	1
Methane (TCD)	**6500**		390	77	39	ug/L		11/07/18 20:32	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**22000**		50	50	17	ug/L		11/02/18 19:21	1
Manganese	**1400**		10	3.0	1.0	ug/L		11/02/18 19:21	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**470**		3.0	3.0	1.5	ug/L		11/01/18 15:53	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	**1.5**		1.0	0.50	0.16	mg/L		11/01/18 06:33	1

Client Sample ID: G6M-04-04X_FAL18

Lab Sample ID: 680-159877-5

Date Collected: 10/26/18 12:30

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:38	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:38	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 07:38	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:38	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 07:38	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 07:38	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 07:38	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 07:38	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-04-04X_FAL18
Date Collected: 10/26/18 12:30
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 07:38	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 07:38	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:38	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 07:38	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.74	ug/L		11/07/18 07:38	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 07:38	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 07:38	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:38	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 07:38	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 07:38	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 07:38	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 07:38	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 07:38	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 07:38	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:38	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:38	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 07:38	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 07:38	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:38	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 07:38	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 07:38	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 07:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:38	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 07:38	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:38	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 07:38	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 07:38	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 07:38	1
cis-1,2-Dichloroethene	**0.83**	**J**	1.0	1.0	0.41	ug/L		11/07/18 07:38	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 07:38	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:38	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 07:38	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 07:38	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 07:38	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 07:38	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:38	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 07:38	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 07:38	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 07:38	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 07:38	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 07:38	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 07:38	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:38	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 07:38	1

Client Sample ID: G6M-04-04X_FAL18

Lab Sample ID: 680-159877-5

Date Collected: 10/26/18 12:30

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 07:38	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 07:38	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:38	1
trans-1,2-Dichloroethene	**0.37**	**J**	1.0	1.0	0.37	ug/L		11/07/18 07:38	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:38	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 07:38	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 07:38	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 07:38	1
Vinyl chloride	**0.60**	**J**	1.0	1.0	0.50	ug/L		11/07/18 07:38	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*81 - 118*		*11/07/18 07:38*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 07:38*	*1*
Dibromofluoromethane (Surr)	*113*		*80 - 119*		*11/07/18 07:38*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/07/18 07:38*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**110000**	**J1**	50	50	17	ug/L		11/02/18 18:28	1
Manganese	**21000**	**J1**	10	3.0	1.0	ug/L		11/02/18 18:28	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**460**	**J1**	3.0	3.0	1.5	ug/L		11/01/18 15:09	1

Client Sample ID: G6M-EB03

Lab Sample ID: 680-159877-6

Date Collected: 10/26/18 13:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:01	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 08:01	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:01	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:01	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 08:01	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:01	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 08:01	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:01	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 08:01	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:01	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 08:01	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 08:01	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 08:01	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 08:01	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:01	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-EB03
Date Collected: 10/26/18 13:00
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:01	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 08:01	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:01	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 08:01	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:01	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 08:01	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:01	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:01	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 08:01	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 08:01	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:01	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:01	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:01	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 08:01	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:01	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 08:01	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:01	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 08:01	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:01	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 08:01	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:01	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:01	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:01	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 08:01	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:01	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:01	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:01	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 08:01	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:01	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:01	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:01	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:01	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 08:01	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:01	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:01	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:01	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 08:01	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:01	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:01	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:01	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:01	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 08:01	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:01	1

Client Sample ID: G6M-EB03

Lab Sample ID: 680-159877-6

Date Collected: 10/26/18 13:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 08:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*11/07/18 08:01*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/07/18 08:01*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*11/07/18 08:01*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/07/18 08:01*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/02/18 19:02	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/02/18 19:02	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/01/18 15:38	1

Client Sample ID: G6M-TB05

Lab Sample ID: 680-159877-7

Date Collected: 10/26/18 00:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 14:13	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 14:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/06/18 14:13	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 14:13	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 14:13	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/06/18 14:13	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 14:13	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/06/18 14:13	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 14:13	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/06/18 14:13	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 14:13	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/06/18 14:13	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/06/18 14:13	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/06/18 14:13	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/06/18 14:13	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 14:13	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 14:13	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/06/18 14:13	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 14:13	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/06/18 14:13	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 14:13	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/06/18 14:13	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 14:13	1
4-Isopropyltoluene	1.0	U M	1.0	1.0	0.48	ug/L		11/06/18 14:13	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/06/18 14:13	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-TB05
Date Collected: 10/26/18 00:00
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		11/06/18 14:13	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/06/18 14:13	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 14:13	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 14:13	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/06/18 14:13	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 14:13	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/06/18 14:13	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 14:13	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/06/18 14:13	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 14:13	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 14:13	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/06/18 14:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 14:13	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 14:13	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 14:13	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/06/18 14:13	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 14:13	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 14:13	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
Isopropylbenzene	1.0	U M	1.0	1.0	0.35	ug/L		11/06/18 14:13	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/06/18 14:13	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 14:13	1
Naphthalene	5.0	U M	5.0	5.0	2.5	ug/L		11/06/18 14:13	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 14:13	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 14:13	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/06/18 14:13	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 14:13	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 14:13	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 14:13	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/06/18 14:13	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 14:13	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 14:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 14:13	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 14:13	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 14:13	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/06/18 14:13	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 14:13	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/06/18 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/06/18 14:13*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/06/18 14:13*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/06/18 14:13*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/06/18 14:13*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159877-1	G6M-04-14X_FAL18	102	93	109	106
680-159877-2	G6M-02-03X_FAL18	101	92	106	102
680-159877-3	G6M-97-28X_FAL18	102	94	107	104
680-159877-4	G6M-02-04X_FAL18	99	93	107	102
680-159877-5	G6M-04-04X_FAL18	110	93	113	102
680-159877-6	G6M-EB03	102	92	109	103
680-159877-7	G6M-TB05	99	93	106	104
LCS 680-546363/4	Lab Control Sample	96	95	102	103
LCS 680-546498/5	Lab Control Sample	96	95	101	104
LCSD 680-546363/5	Lab Control Sample Dup	92	95	99	103
LCSD 680-546498/6	Lab Control Sample Dup	96	96	100	105
MB 680-546363/10	Method Blank	96	92	104	103
MB 680-546498/11	Method Blank	99	93	106	104

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

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

Lab Sample ID: MB 680-546363/10
Matrix: Water
Analysis Batch: 546363

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/06/18 13:04	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 13:04	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/06/18 13:04	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 13:04	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/06/18 13:04	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 13:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/06/18 13:04	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/06/18 13:04	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/06/18 13:04	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/06/18 13:04	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 13:04	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/06/18 13:04	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/06/18 13:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 13:04	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/06/18 13:04	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/06/18 13:04	1
Acetone	10	U	10	10	7.0	ug/L		11/06/18 13:04	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/06/18 13:04	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/06/18 13:04	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/06/18 13:04	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 13:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/06/18 13:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 13:04	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 13:04	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/06/18 13:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 13:04	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1

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

Lab Sample ID: MB 680-546363/10
Matrix: Water
Analysis Batch: 546363

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/06/18 13:04	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 13:04	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 13:04	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/06/18 13:04	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 13:04	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/06/18 13:04	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/06/18 13:04	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/06/18 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/06/18 13:04*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/06/18 13:04*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/06/18 13:04*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/06/18 13:04*	*1*

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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	53.7		ug/L		107	78 - 124
1,1,1-Trichloroethane	50.0	49.7		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	50.0	57.2		ug/L		114	71 - 121
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	80 - 119
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	47.9		ug/L		96	71 - 131
1,1-Dichloropropene	50.0	52.1		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	50.0	52.1		ug/L		104	69 - 129
1,2,3-Trichloropropane	50.0	57.9		ug/L		116	73 - 122
1,2,4-Trichlorobenzene	50.0	52.9		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	55.6		ug/L		111	62 - 128
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	50.6		ug/L		101	73 - 128
1,2-Dichloroethene, Total	100	97.2		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	48.7		ug/L		97	78 - 122

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

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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	50.9		ug/L		102	75 - 124
1,3-Dichlorobenzene	50.0	54.1		ug/L		108	80 - 119
1,3-Dichloropropane	50.0	51.9		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	79 - 118
2,2-Dichloropropane	50.0	53.4		ug/L		107	60 - 139
2-Butanone (MEK)	250	284		ug/L		114	56 - 143
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122
2-Hexanone	250	284		ug/L		113	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	51.4		ug/L		103	77 - 127
4-Methyl-2-pentanone (MIBK)	250	281		ug/L		112	67 - 130
Acetone	250	280		ug/L		112	39 - 160
Benzene	50.0	49.2		ug/L		98	79 - 120
Bromobenzene	50.0	51.5		ug/L		103	80 - 120
Bromoform	50.0	43.7		ug/L		87	66 - 130
Bromomethane	50.0	41.1		ug/L		82	53 - 141
Carbon disulfide	50.0	47.3		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	50.0	51.4		ug/L		103	82 - 118
Chlorobromomethane	50.0	49.5		ug/L		99	78 - 123
Chlorodibromomethane	50.0	47.9		ug/L		96	74 - 126
Chloroethane	50.0	44.5		ug/L		89	60 - 138
Chloroform	50.0	49.7		ug/L		99	79 - 124
Chloromethane	50.0	50.5	M	ug/L		101	50 - 139
cis-1,2-Dichloroethene	50.0	48.5		ug/L		97	78 - 123
cis-1,3-Dichloropropene	50.0	48.9		ug/L		98	75 - 124
Dibromomethane	50.0	52.9		ug/L		106	79 - 123
Dichlorobromomethane	50.0	48.0		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	56.4		ug/L		113	32 - 152
Ethylbenzene	50.0	51.4		ug/L		103	79 - 121
Ethylene Dibromide	50.0	55.0		ug/L		110	75 - 127
Hexachlorobutadiene	50.0	49.8		ug/L		100	66 - 134
Isopropylbenzene	50.0	51.7		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	52.8		ug/L		106	71 - 124
Methylene Chloride	50.0	49.3		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Naphthalene	50.0	61.0		ug/L		122	61 - 128
n-Butylbenzene	50.0	53.0		ug/L		106	75 - 128
N-Propylbenzene	50.0	51.4		ug/L		103	76 - 126
o-Xylene	50.0	50.4		ug/L		101	78 - 122
sec-Butylbenzene	50.0	50.8		ug/L		102	77 - 126
Styrene	50.0	53.2		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.7		ug/L		101	78 - 124
Tetrachloroethene	50.0	54.0		ug/L		108	74 - 129
Toluene	50.0	48.7		ug/L		97	80 - 121
trans-1,2-Dichloroethene	50.0	48.7		ug/L		97	75 - 124
trans-1,3-Dichloropropene	50.0	50.4		ug/L		101	73 - 127
Trichloroethene	50.0	52.1		ug/L		104	79 - 123

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

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			50.0	50.2		ug/L		100	65 - 141		
Vinyl acetate			100	122		ug/L		122	54 - 146		
Vinyl chloride			50.0	50.1		ug/L		100	58 - 137		
Xylenes, Total			100	101		ug/L		101	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Lab Sample ID: LCSD 680-546363/5
Matrix: Water
Analysis Batch: 546363

Client Sample 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	54.4		ug/L		109	78 - 124	1	20
1,1,1-Trichloroethane			50.0	48.5		ug/L		97	74 - 131	2	20
1,1,2,2-Tetrachloroethane			50.0	55.3		ug/L		111	71 - 121	3	20
1,1,2-Trichloroethane			50.0	49.0		ug/L		98	80 - 119	4	20
1,1-Dichloroethane			50.0	48.9		ug/L		98	77 - 125	2	20
1,1-Dichloroethene			50.0	46.6		ug/L		93	71 - 131	3	20
1,1-Dichloropropene			50.0	50.5		ug/L		101	79 - 125	3	20
1,2,3-Trichlorobenzene			50.0	51.9		ug/L		104	69 - 129	0	20
1,2,3-Trichloropropane			50.0	55.2		ug/L		110	73 - 122	5	20
1,2,4-Trichlorobenzene			50.0	50.7		ug/L		101	69 - 130	4	20
1,2,4-Trimethylbenzene			50.0	50.2		ug/L		100	76 - 124	0	20
1,2-Dibromo-3-Chloropropane			50.0	53.3		ug/L		107	62 - 128	4	20
1,2-Dichlorobenzene			50.0	50.9		ug/L		102	80 - 119	2	20
1,2-Dichloroethane			50.0	47.4		ug/L		95	73 - 128	6	20
1,2-Dichloroethene, Total			100	93.5		ug/L		93	79 - 121	4	20
1,2-Dichloropropane			50.0	47.1		ug/L		94	78 - 122	3	20
1,3,5-Trimethylbenzene			50.0	51.0		ug/L		102	75 - 124	0	20
1,3-Dichlorobenzene			50.0	53.1		ug/L		106	80 - 119	2	20
1,3-Dichloropropane			50.0	50.4		ug/L		101	80 - 119	3	20
1,4-Dichlorobenzene			50.0	51.7		ug/L		103	79 - 118	1	20
2,2-Dichloropropane			50.0	51.0		ug/L		102	60 - 139	5	20
2-Butanone (MEK)			250	260		ug/L		104	56 - 143	9	20
2-Chlorotoluene			50.0	51.6		ug/L		103	79 - 122	0	20
2-Hexanone			250	260		ug/L		104	57 - 139	8	20
4-Chlorotoluene			50.0	50.4		ug/L		101	78 - 122	1	20
4-Isopropyltoluene			50.0	52.2		ug/L		104	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)			250	262		ug/L		105	67 - 130	7	20
Acetone			250	251		ug/L		100	39 - 160	11	20
Benzene			50.0	48.4		ug/L		97	79 - 120	2	20
Bromobenzene			50.0	51.0		ug/L		102	80 - 120	1	20
Bromoform			50.0	42.4		ug/L		85	66 - 130	3	20
Bromomethane			50.0	42.1		ug/L		84	53 - 141	2	20

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

Lab Sample ID: LCSD 680-546363/5
Matrix: Water
Analysis Batch: 546363

Client Sample 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 disulfide			50.0	46.8		ug/L		94	64 - 133	1	20
Carbon tetrachloride			50.0	47.8		ug/L		96	72 - 136	3	20
Chlorobenzene			50.0	51.3		ug/L		103	82 - 118	0	20
Chlorobromomethane			50.0	47.2		ug/L		94	78 - 123	5	20
Chlorodibromomethane			50.0	46.6		ug/L		93	74 - 126	3	20
Chloroethane			50.0	41.3		ug/L		83	60 - 138	7	20
Chloroform			50.0	48.0		ug/L		96	79 - 124	3	20
Chloromethane			50.0	49.9	M	ug/L		100	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.5		ug/L		93	78 - 123	4	20
cis-1,3-Dichloropropene			50.0	47.2		ug/L		94	75 - 124	4	20
Dibromomethane			50.0	50.9		ug/L		102	79 - 123	4	20
Dichlorobromomethane			50.0	46.4		ug/L		93	79 - 125	3	20
Dichlorodifluoromethane			50.0	55.9		ug/L		112	32 - 152	1	20
Ethylbenzene			50.0	51.9		ug/L		104	79 - 121	1	20
Ethylene Dibromide			50.0	52.8		ug/L		106	75 - 127	4	20
Hexachlorobutadiene			50.0	49.7		ug/L		99	66 - 134	0	20
Isopropylbenzene			50.0	52.2		ug/L		104	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.9		ug/L		100	71 - 124	6	20
Methylene Chloride			50.0	46.5		ug/L		93	74 - 124	6	20
m-Xylene & p-Xylene			50.0	51.0		ug/L		102	80 - 121	1	20
Naphthalene			50.0	58.5		ug/L		117	61 - 128	4	20
n-Butylbenzene			50.0	52.5		ug/L		105	75 - 128	1	20
N-Propylbenzene			50.0	51.2		ug/L		102	76 - 126	0	20
o-Xylene			50.0	50.2		ug/L		100	78 - 122	0	20
sec-Butylbenzene			50.0	51.1		ug/L		102	77 - 126	1	20
Styrene			50.0	52.6		ug/L		105	78 - 123	1	20
tert-Butylbenzene			50.0	50.7		ug/L		101	78 - 124	0	20
Tetrachloroethene			50.0	52.9		ug/L		106	74 - 129	2	20
Toluene			50.0	48.5		ug/L		97	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	47.0		ug/L		94	75 - 124	4	20
trans-1,3-Dichloropropene			50.0	49.3		ug/L		99	73 - 127	2	20
Trichloroethene			50.0	51.1		ug/L		102	79 - 123	2	20
Trichlorofluoromethane			50.0	52.8		ug/L		106	65 - 141	5	20
Vinyl acetate			100	116		ug/L		116	54 - 146	5	20
Vinyl chloride			50.0	48.8		ug/L		98	58 - 137	3	20
Xylenes, Total			100	101		ug/L		101	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

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

Lab Sample ID: MB 680-546498/11
Matrix: Water
Analysis Batch: 546498

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 01:50	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 01:50	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 01:50	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 01:50	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 01:50	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 01:50	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 01:50	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 01:50	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 01:50	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 01:50	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 01:50	1
1,4-Dichlorobenzene	1.0	U M	1.0	1.0	0.46	ug/L		11/07/18 01:50	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 01:50	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 01:50	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 01:50	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 01:50	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 01:50	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 01:50	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 01:50	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 01:50	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 01:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 01:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 01:50	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 01:50	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 01:50	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 01:50	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1

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

Lab Sample ID: MB 680-546498/11
Matrix: Water
Analysis Batch: 546498

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 01:50	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 01:50	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 01:50	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 01:50	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 01:50	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 01:50	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 01:50	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 01:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/07/18 01:50*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 01:50*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/07/18 01:50*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/07/18 01:50*	*1*

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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	55.2		ug/L		110	78 - 124
1,1,1-Trichloroethane	50.0	49.0		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	56.7		ug/L		113	71 - 121
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 119
1,1-Dichloroethane	50.0	47.1		ug/L		94	77 - 125
1,1-Dichloroethene	50.0	47.3		ug/L		95	71 - 131
1,1-Dichloropropene	50.0	51.5		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	52.4		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	55.0		ug/L		110	73 - 122
1,2,4-Trichlorobenzene	50.0	51.6		ug/L		103	69 - 130
1,2,4-Trimethylbenzene	50.0	51.3		ug/L		103	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	56.4		ug/L		113	62 - 128
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119
1,2-Dichloroethane	50.0	49.5		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	93.9		ug/L		94	79 - 121
1,2-Dichloropropane	50.0	48.1		ug/L		96	78 - 122

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

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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	51.5		ug/L		103	75 - 124
1,3-Dichlorobenzene	50.0	53.9		ug/L		108	80 - 119
1,3-Dichloropropane	50.0	52.1		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	51.9		ug/L		104	79 - 118
2,2-Dichloropropane	50.0	43.7		ug/L		87	60 - 139
2-Butanone (MEK)	250	264		ug/L		106	56 - 143
2-Chlorotoluene	50.0	51.5		ug/L		103	79 - 122
2-Hexanone	250	269		ug/L		108	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	52.4		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	272		ug/L		109	67 - 130
Acetone	250	270		ug/L		108	39 - 160
Benzene	50.0	49.1		ug/L		98	79 - 120
Bromobenzene	50.0	51.8		ug/L		104	80 - 120
Bromoform	50.0	45.8		ug/L		92	66 - 130
Bromomethane	50.0	49.5		ug/L		99	53 - 141
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.8		ug/L		100	72 - 136
Chlorobenzene	50.0	52.3		ug/L		105	82 - 118
Chlorobromomethane	50.0	48.8		ug/L		98	78 - 123
Chlorodibromomethane	50.0	49.3		ug/L		99	74 - 126
Chloroethane	50.0	45.2		ug/L		90	60 - 138
Chloroform	50.0	49.0		ug/L		98	79 - 124
Chloromethane	50.0	49.7	M	ug/L		99	50 - 139
cis-1,2-Dichloroethene	50.0	46.4		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	46.4		ug/L		93	75 - 124
Dibromomethane	50.0	52.9		ug/L		106	79 - 123
Dichlorobromomethane	50.0	48.2		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	57.6		ug/L		115	32 - 152
Ethylbenzene	50.0	52.6		ug/L		105	79 - 121
Ethylene Dibromide	50.0	54.3		ug/L		109	75 - 127
Hexachlorobutadiene	50.0	49.3		ug/L		99	66 - 134
Isopropylbenzene	50.0	52.4		ug/L		105	72 - 131
Methyl tert-butyl ether	50.0	48.4		ug/L		97	71 - 124
Methylene Chloride	50.0	48.3		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	51.1		ug/L		102	80 - 121
Naphthalene	50.0	60.3		ug/L		121	61 - 128
n-Butylbenzene	50.0	52.6		ug/L		105	75 - 128
N-Propylbenzene	50.0	51.7		ug/L		103	76 - 126
o-Xylene	50.0	51.0		ug/L		102	78 - 122
sec-Butylbenzene	50.0	51.2		ug/L		102	77 - 126
Styrene	50.0	53.3		ug/L		107	78 - 123
tert-Butylbenzene	50.0	50.8		ug/L		102	78 - 124
Tetrachloroethene	50.0	53.1		ug/L		106	74 - 129
Toluene	50.0	48.6		ug/L		97	80 - 121
trans-1,2-Dichloroethene	50.0	47.5		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.5		ug/L		99	73 - 127
Trichloroethene	50.0	52.3		ug/L		105	79 - 123

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

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			50.0	51.2		ug/L		102	65 - 141		
Vinyl acetate			100	101		ug/L		101	54 - 146		
Vinyl chloride			50.0	50.0		ug/L		100	58 - 137		
Xylenes, Total			100	102		ug/L		102	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: LCSD 680-546498/6
Matrix: Water
Analysis Batch: 546498

Client Sample 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	55.1		ug/L		110	78 - 124	0	20
1,1,1-Trichloroethane			50.0	50.0		ug/L		100	74 - 131	2	20
1,1,2,2-Tetrachloroethane			50.0	54.7		ug/L		109	71 - 121	4	20
1,1,2-Trichloroethane			50.0	48.0		ug/L		96	80 - 119	5	20
1,1-Dichloroethane			50.0	48.6		ug/L		97	77 - 125	3	20
1,1-Dichloroethene			50.0	48.1		ug/L		96	71 - 131	2	20
1,1-Dichloropropene			50.0	51.2		ug/L		102	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	51.8		ug/L		104	69 - 129	1	20
1,2,3-Trichloropropane			50.0	56.8		ug/L		114	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	51.9		ug/L		104	69 - 130	1	20
1,2,4-Trimethylbenzene			50.0	52.0		ug/L		104	76 - 124	1	20
1,2-Dibromo-3-Chloropropane			50.0	54.1		ug/L		108	62 - 128	4	20
1,2-Dichlorobenzene			50.0	52.0		ug/L		104	80 - 119	1	20
1,2-Dichloroethane			50.0	48.8		ug/L		98	73 - 128	1	20
1,2-Dichloroethene, Total			100	92.8		ug/L		93	79 - 121	1	20
1,2-Dichloropropane			50.0	47.3		ug/L		95	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	52.2		ug/L		104	75 - 124	1	20
1,3-Dichlorobenzene			50.0	54.3		ug/L		109	80 - 119	1	20
1,3-Dichloropropane			50.0	50.3		ug/L		101	80 - 119	4	20
1,4-Dichlorobenzene			50.0	52.7		ug/L		105	79 - 118	2	20
2,2-Dichloropropane			50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)			250	243		ug/L		97	56 - 143	8	20
2-Chlorotoluene			50.0	52.7		ug/L		105	79 - 122	2	20
2-Hexanone			250	251		ug/L		100	57 - 139	7	20
4-Chlorotoluene			50.0	51.9		ug/L		104	78 - 122	2	20
4-Isopropyltoluene			50.0	52.3		ug/L		105	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)			250	254		ug/L		102	67 - 130	7	20
Acetone			250	230		ug/L		92	39 - 160	16	20
Benzene			50.0	48.6		ug/L		97	79 - 120	1	20
Bromobenzene			50.0	51.6		ug/L		103	80 - 120	0	20
Bromoform			50.0	44.4		ug/L		89	66 - 130	3	20
Bromomethane			50.0	50.1		ug/L		100	53 - 141	1	20

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

Lab Sample ID: LCSD 680-546498/6
Matrix: Water
Analysis Batch: 546498

Client Sample 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 disulfide			50.0	46.9		ug/L		94	64 - 133	1	20
Carbon tetrachloride			50.0	49.7		ug/L		99	72 - 136	0	20
Chlorobenzene			50.0	52.6		ug/L		105	82 - 118	1	20
Chlorobromomethane			50.0	47.7		ug/L		95	78 - 123	2	20
Chlorodibromomethane			50.0	47.4		ug/L		95	74 - 126	4	20
Chloroethane			50.0	43.8		ug/L		88	60 - 138	3	20
Chloroform			50.0	49.4		ug/L		99	79 - 124	1	20
Chloromethane			50.0	50.3	M	ug/L		101	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	45.9		ug/L		92	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	45.8		ug/L		92	75 - 124	1	20
Dibromomethane			50.0	51.1		ug/L		102	79 - 123	3	20
Dichlorobromomethane			50.0	47.4		ug/L		95	79 - 125	2	20
Dichlorodifluoromethane			50.0	57.8		ug/L		116	32 - 152	0	20
Ethylbenzene			50.0	53.1		ug/L		106	79 - 121	1	20
Ethylene Dibromide			50.0	52.2		ug/L		104	75 - 127	4	20
Hexachlorobutadiene			50.0	48.8		ug/L		98	66 - 134	1	20
Isopropylbenzene			50.0	53.2		ug/L		106	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.9		ug/L		100	71 - 124	3	20
Methylene Chloride			50.0	47.9		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene			50.0	52.2		ug/L		104	80 - 121	2	20
Naphthalene			50.0	59.4		ug/L		119	61 - 128	1	20
n-Butylbenzene			50.0	52.2		ug/L		104	75 - 128	1	20
N-Propylbenzene			50.0	52.3		ug/L		105	76 - 126	1	20
o-Xylene			50.0	51.6		ug/L		103	78 - 122	1	20
sec-Butylbenzene			50.0	52.1		ug/L		104	77 - 126	2	20
Styrene			50.0	53.7		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	51.7		ug/L		103	78 - 124	2	20
Tetrachloroethene			50.0	53.4		ug/L		107	74 - 129	0	20
Toluene			50.0	48.4		ug/L		97	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	46.8		ug/L		94	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	48.1		ug/L		96	73 - 127	3	20
Trichloroethene			50.0	52.0		ug/L		104	79 - 123	1	20
Trichlorofluoromethane			50.0	52.6		ug/L		105	65 - 141	3	20
Vinyl acetate			100	97.7		ug/L		98	54 - 146	4	20
Vinyl chloride			50.0	49.4		ug/L		99	58 - 137	1	20
Xylenes, Total			100	104		ug/L		104	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-546157/8
Matrix: Water
Analysis Batch: 546157

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/04/18 09:50	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/04/18 09:50	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		11/04/18 09:50	1
Methane (TCD)	77	U	390	77	39	ug/L		11/04/18 09:50	1

Lab Sample ID: LCS 680-546157/3
Matrix: Water
Analysis Batch: 546157

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	293		ug/L		102	75 - 125
Ethylene	269	276		ug/L		102	75 - 125
Methane	154	152		ug/L		99	75 - 125

Lab Sample ID: LCS 680-546157/6
Matrix: Water
Analysis Batch: 546157

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	1920	1890		ug/L		98	75 - 125

Lab Sample ID: LCSD 680-546157/4
Matrix: Water
Analysis Batch: 546157

Client Sample 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	261		ug/L		91	75 - 125	12	30
Ethylene	269	243		ug/L		90	75 - 125	13	30
Methane	154	135		ug/L		88	75 - 125	12	30

Lab Sample ID: LCSD 680-546157/7
Matrix: Water
Analysis Batch: 546157

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	1920	1840		ug/L		96	75 - 125	3	30

Lab Sample ID: MB 680-546737/40
Matrix: Water
Analysis Batch: 546737

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/07/18 18:49	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 18:49	1
Methane	0.58	U M	0.58	0.58	0.29	ug/L		11/07/18 18:49	1
Methane (TCD)	77	U	390	77	39	ug/L		11/07/18 18:49	1

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

Lab Sample ID: LCS 680-546737/35
Matrix: Water
Analysis Batch: 546737

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	1790		ug/L		93	75 - 125

Lab Sample ID: LCS 680-546737/37
Matrix: Water
Analysis Batch: 546737

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	319		ug/L		111	75 - 125
Ethylene	269	301		ug/L		112	75 - 125
Methane	154	166		ug/L		108	75 - 125

Lab Sample ID: LCSD 680-546737/36
Matrix: Water
Analysis Batch: 546737

Client Sample 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	75 - 125	2	30

Lab Sample ID: LCSD 680-546737/53
Matrix: Water
Analysis Batch: 546737

Client Sample 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	247		ug/L					
Ethylene	269	237		ug/L					
Methane	154	133		ug/L					

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-545704/1-A
Matrix: Water
Analysis Batch: 546153

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 545704

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/02/18 18:18	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/02/18 18:18	1

Lab Sample ID: LCS 680-545704/2-A
Matrix: Water
Analysis Batch: 546153

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 545704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4830		ug/L		97	87 - 115
Manganese	500	499		ug/L		100	90 - 114

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

Lab Sample ID: 680-159877-5 MS — **Client Sample ID: G6M-04-04X_FAL18**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 546153 — **Prep Batch: 545704**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	110000	J1	5000	113000	4	ug/L		90	87 - 115
Manganese	21000	J1	500	21000	4	ug/L		89	90 - 114

Lab Sample ID: 680-159877-5 MSD — **Client Sample ID: G6M-04-04X_FAL18**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 546153 — **Prep Batch: 545704**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	110000	J1	5000	109000	4	ug/L		1	87 - 115	4	20
Manganese	21000	J1	500	20200	4	ug/L		-85	90 - 114	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-545696/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 546011 — **Prep Batch: 545696**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/01/18 15:01	1

Lab Sample ID: LCS 680-545696/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 546011 — **Prep Batch: 545696**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	110		ug/L		110	84 - 116

Lab Sample ID: 680-159877-5 MS — **Client Sample ID: G6M-04-04X_FAL18**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 546011 — **Prep Batch: 545696**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	460	J1	100	578	4	ug/L		115	84 - 116

Lab Sample ID: 680-159877-5 MSD — **Client Sample ID: G6M-04-04X_FAL18**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 546011 — **Prep Batch: 545696**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	460	J1	100	540	4	ug/L		77	84 - 116	7	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-435842/35 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 435842

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.348	J	1.0	0.50	0.16	mg/L		10/31/18 23:28	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Lab Sample ID: LCS 280-435842/34
Matrix: Water
Analysis Batch: 435842

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	23.4		mg/L		93	88 - 112		

GC/MS VOA

Analysis Batch: 546363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-7	G6M-TB05	Total/NA	Water	8260B	
MB 680-546363/10	Method Blank	Total/NA	Water	8260B	
LCS 680-546363/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-546363/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 546498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-1	G6M-04-14X_FAL18	Total/NA	Water	8260B	
680-159877-2	G6M-02-03X_FAL18	Total/NA	Water	8260B	
680-159877-3	G6M-97-28X_FAL18	Total/NA	Water	8260B	
680-159877-4	G6M-02-04X_FAL18	Total/NA	Water	8260B	
680-159877-5	G6M-04-04X_FAL18	Total/NA	Water	8260B	
680-159877-6	G6M-EB03	Total/NA	Water	8260B	
MB 680-546498/11	Method Blank	Total/NA	Water	8260B	
LCS 680-546498/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-546498/6	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 546157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-2	G6M-02-03X_FAL18	Total/NA	Water	RSK-175	
MB 680-546157/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-546157/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-546157/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-546157/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-546157/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Analysis Batch: 546737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-3	G6M-97-28X_FAL18	Total/NA	Water	RSK-175	
680-159877-4	G6M-02-04X_FAL18	Total/NA	Water	RSK-175	
MB 680-546737/40	Method Blank	Total/NA	Water	RSK-175	
LCS 680-546737/35	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-546737/37	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-546737/36	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-546737/53	Lab Control Sample Dup	Total/NA	Water	RSK-175	

Metals

Prep Batch: 545696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-1	G6M-04-14X_FAL18	Dissolved	Water	3005A	
680-159877-2	G6M-02-03X_FAL18	Dissolved	Water	3005A	
680-159877-3	G6M-97-28X_FAL18	Dissolved	Water	3005A	
680-159877-4	G6M-02-04X_FAL18	Dissolved	Water	3005A	
680-159877-5	G6M-04-04X_FAL18	Dissolved	Water	3005A	
680-159877-6	G6M-EB03	Dissolved	Water	3005A	
MB 680-545696/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-545696/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 545696 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-5 MS	G6M-04-04X_FAL18	Dissolved	Water	3005A	
680-159877-5 MSD	G6M-04-04X_FAL18	Dissolved	Water	3005A	

Prep Batch: 545704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-1	G6M-04-14X_FAL18	Dissolved	Water	3005A	
680-159877-2	G6M-02-03X_FAL18	Dissolved	Water	3005A	
680-159877-3	G6M-97-28X_FAL18	Dissolved	Water	3005A	
680-159877-4	G6M-02-04X_FAL18	Dissolved	Water	3005A	
680-159877-5	G6M-04-04X_FAL18	Dissolved	Water	3005A	
680-159877-6	G6M-EB03	Dissolved	Water	3005A	
MB 680-545704/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-545704/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-159877-5 MS	G6M-04-04X_FAL18	Dissolved	Water	3005A	
680-159877-5 MSD	G6M-04-04X_FAL18	Dissolved	Water	3005A	

Analysis Batch: 546011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-1	G6M-04-14X_FAL18	Dissolved	Water	6020A	545696
680-159877-2	G6M-02-03X_FAL18	Dissolved	Water	6020A	545696
680-159877-3	G6M-97-28X_FAL18	Dissolved	Water	6020A	545696
680-159877-4	G6M-02-04X_FAL18	Dissolved	Water	6020A	545696
680-159877-5	G6M-04-04X_FAL18	Dissolved	Water	6020A	545696
680-159877-6	G6M-EB03	Dissolved	Water	6020A	545696
MB 680-545696/1-A	Method Blank	Total Recoverable	Water	6020A	545696
LCS 680-545696/2-A	Lab Control Sample	Total Recoverable	Water	6020A	545696
680-159877-5 MS	G6M-04-04X_FAL18	Dissolved	Water	6020A	545696
680-159877-5 MSD	G6M-04-04X_FAL18	Dissolved	Water	6020A	545696

Analysis Batch: 546153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-1	G6M-04-14X_FAL18	Dissolved	Water	6010C	545704
680-159877-2	G6M-02-03X_FAL18	Dissolved	Water	6010C	545704
680-159877-3	G6M-97-28X_FAL18	Dissolved	Water	6010C	545704
680-159877-4	G6M-02-04X_FAL18	Dissolved	Water	6010C	545704
680-159877-5	G6M-04-04X_FAL18	Dissolved	Water	6010C	545704
680-159877-6	G6M-EB03	Dissolved	Water	6010C	545704
MB 680-545704/1-A	Method Blank	Total Recoverable	Water	6010C	545704
LCS 680-545704/2-A	Lab Control Sample	Total Recoverable	Water	6010C	545704
680-159877-5 MS	G6M-04-04X_FAL18	Dissolved	Water	6010C	545704
680-159877-5 MSD	G6M-04-04X_FAL18	Dissolved	Water	6010C	545704

General Chemistry

Analysis Batch: 435842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-2	G6M-02-03X_FAL18	Total/NA	Water	9060A	
680-159877-3	G6M-97-28X_FAL18	Total/NA	Water	9060A	
680-159877-4	G6M-02-04X_FAL18	Total/NA	Water	9060A	
MB 280-435842/35	Method Blank	Total/NA	Water	9060A	

General Chemistry (Continued)

Analysis Batch: 435842 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-435842/34	Lab Control Sample	Total/NA	Water	9060A	

Client Sample ID: G6M-04-14X_FAL18

Lab Sample ID: 680-159877-1

Date Collected: 10/25/18 10:35

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 05:19	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6010C		1			546153	11/02/18 19:16	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:49	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-03X_FAL18

Lab Sample ID: 680-159877-2

Date Collected: 10/24/18 14:00

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 04:56	JLK	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	546157	11/04/18 13:53	KAB	TAL SAV
	Instrument ID: CVGU									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6010C		1			546153	11/02/18 18:57	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:32	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	9060A		1			435842	11/01/18 06:04	LPL	TAL DEN
	Instrument ID: WC_SHI3									

Client Sample ID: G6M-97-28X_FAL18

Lab Sample ID: 680-159877-3

Date Collected: 10/26/18 09:00

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 05:42	JLK	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	546737	11/07/18 20:19	KAB	TAL SAV
	Instrument ID: CVGU									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6010C		1			546153	11/02/18 18:52	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:28	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-97-28X_FAL18

Lab Sample ID: 680-159877-3

Date Collected: 10/26/18 09:00
Date Received: 10/27/18 09:55

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	9060A		1			435842	11/01/18 06:19	LPL	TAL DEN
	Instrument ID: WC_SHI3									

Client Sample ID: G6M-02-04X_FAL18

Lab Sample ID: 680-159877-4

Date Collected: 10/26/18 10:55
Date Received: 10/27/18 09:55

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	546498	11/07/18 07:15	JLK	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	546737	11/07/18 20:32	KAB	TAL SAV
	Instrument ID: CVGU									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6010C		1			546153	11/02/18 19:21	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:53	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	9060A		1			435842	11/01/18 06:33	LPL	TAL DEN
	Instrument ID: WC_SHI3									

Client Sample ID: G6M-04-04X_FAL18

Lab Sample ID: 680-159877-5

Date Collected: 10/26/18 12:30
Date Received: 10/27/18 09:55

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	546498	11/07/18 07:38	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6010C		1			546153	11/02/18 18:28	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:09	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-EB03

Lab Sample ID: 680-159877-6

Date Collected: 10/26/18 13:00
Date Received: 10/27/18 09:55

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	546498	11/07/18 08:01	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545704	10/31/18 13:20	AJR	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Client Sample ID: G6M-EB03

Lab Sample ID: 680-159877-6

Date Collected: 10/26/18 13:00

Matrix: Water

Date Received: 10/27/18 09:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6010C		1			546153	11/02/18 19:02	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	545696	10/31/18 13:20	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546011	11/01/18 15:38	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-TB05

Lab Sample ID: 680-159877-7

Date Collected: 10/26/18 00:00

Matrix: Water

Date Received: 10/27/18 09:55

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	546363	11/06/18 14:13	Y1S	TAL SAV
	Instrument ID: CMSB									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

Equipment:

						RSK175 Dissolved Gases	SW 6010C / FLDFLT - Fe, Mn	SW6020A / FLDFLT - As	SW8260C - VOCs	SW 9060A - TOC							
KOMAN, Long Term Monitoring, AOC 50 Fall 2018																	
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top - Bottom
1	G6M-04-14X_FAL18	WG	10/25/18	1035	MM		X	X	X							G6M-04-14X	N	
2	G6M-02-03X_FAL18	WG	10/24/18	1400	GH	X	X	X	X	X						G6M-02-03X	N	
3	G6M-97-25X-FAL18	WG	10/26/18	0900	BrA	X	X	X	X	X						G6M-97-25X	N	
4	G6M-02-04X-FAL18	WG	10/26/18	1055	BrA	X	X	X	X	X						G6M-02-04X	N	
5	G6M-04-04X_FAL18	WG	10/26/18	1230	BrA		X	X	X							G6M-04-04X		
6																		
7																		
8																		
9	G6M-EB03	WQ	10/26/18	1300	BrA		X	X	X							Field QC	EB3	
10	G6M-TB05	WQ	10/26/18													Field QC	TB5	
Cooler:		**Turn Around Time:**																

Relinquished by: *(Signature)*	Date	Time
	10/24/18	1430
	10/26/18	1330
	10/26/18	1700

Received by: *(Signature)*	Date	Time
	10/24/18	1430
	10/26/18	1330

Shipping

680-159877 Chain of Custody

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10/27/18 955 4.1/4.1

Page 1 of 1

Page 42 of 50

11/8/2018

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

Equipment:

RSK175 Dissolved Gases | SW 6010C / FLDFLT - Fe, Mn | SW6020A / FLDFLT - As | SW8260C - VOCs | SW 9060A - TOC

680-159877 Chain of Custody

KOMAN, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-04-14X_FAL18	WG	10/25/18	1035	MM		X	X	X							G6M-04-14X	N		
2	G6M-02-03X_FAL18	WG	10/24/18	1400	GH	X	X	X	X	X						G6M-02-03X	N		
3	G6M-97-25X-FAL18	WG	10/26/18	0900	BrA	X	X	X	X	X						G6M-97-25X	N		
4	G6M-02-04X-FAL18	WG	10/26/18	1055	BrA	X	X	X	X	X						G6M-02-04X	N		
5	G6M-04-04X_FAL18	WG	10/26/18	1230	BrA		X	X	X							G6M-04-04X			
6																			
7																			
8																			
9	G6M-EB03	WQ	10/26/18	1300	BrA		X	X	X							Field QC	EB3		
10	G6M-TB05	WQ	10/26/18													Field QC	TB5		
Cooler:		Turn Around Time:																	

Relinquished by: *(Signature)*	Date	Time
	10/24/18	~~10~~ 1430
	10/26/18	1330
	10/26/18	1712

Received by: *(Signature)*	Date	Time
	10/24/18	1430
	10/26/18	1330
	10/27/18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments:
AOC 50 Vertical Profile Sampling

Equipment:
3/8"x1/2" HDPE Tubing
Waterra

KOMAN, AOC 50 Drilling Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	VOCS (3-40ml VOA vials, HCl)										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
						Analytical Test Method													
1	G6M-18-01- GW-110-114	WG	10/25/18	0830	B/A	X										G6M-18-01	N		
2	~~G6M-18-01-~~																		
3	~~G6M-18-01~~																		
4	~~G6M-18-01~~																		
5	~~G6M-18-01~~																		
6	~~G6M-18-01~~																		
7	~~G6M-18-01~~																		
8																			
9	G6M-EB01	WQ	10/25/18	1130	B/A	X											WQ		
10	G6M-TB01	WQ	10/25/18			X											WQ		
Cooler:		**Turn Around Time:**																	

Relinquished by: *(Signature)*	Date	Time
	10/26/18	1330
	10-26-18	1700

Received by: *(Signature)*	Date	Time
	10-26-18	1340
	10-27-18	0850

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:
AOC 50 Vertical Profile Sampling

Equipment:

KOMAN, AOC 50 Drilling Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	VOCS (3-40ml VOA vials, HCl)									Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-18-01-GW-90-94	GW	10/24/18	1410	CV	✓									G6M-18-01	GW	90	94
2	G6M-18-01-																	
3	G6M-18-01																	
4	G6M-18-01																	
5	G6M-18-01																	
6	G6M-18-01																	
7	G6M-18-01																	
8																		
9	G6M-EB01																	
10	G6M-TB01	WQ																
Cooler:		**Turn Around Time:**																

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Chris Vignola	10/24/18	1720		10/24/18	1720
	10/26/18	1330		10/26/18	1330
	10/26/18	1800		10/27/18	0855

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**


ARVADA CO 80002
(303) 736-0100
REF:
INV:
PO:
DEPT:
FedEx
Express
SATURDAY 12:00P
PRIORITY OVERNIGHT
TRK# 0201 4258 8393 7406
XO WHHA
80002
CO-US DEN

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159877-1

Login Number: 159877

List Source: TestAmerica Savannah

List Number: 1

Creator: Elwell, Devin M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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: KOMAN Government Solutions, LLC

Job Number: 680-159877-1

Login Number: 159877
List Number: 2
Creator: Staack, KiAundra A

List Source: TestAmerica Denver
List Creation: 10/29/18 09:30 AM

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	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 LTM

TestAmerica Job ID: 680-159877-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-160018-1
Client Project/Site: Fort Devens / AOC 50

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
11/15/2018 6:14:10 PM

Jerry Lanier, Project Manager I
(912)250-0281
jerry.lanier@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.

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Job ID: 680-160018-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC 50

Report Number: 680-160018-1

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 11/01/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.0º C, 2.0º C and 2.3º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-02-01X_Fal18 (680-160018-1), MW-3_Fal18 (680-160018-2), G6M-03-07X_Fal18 (680-160018-3), XSA-12-97X_Fal18 (680-160018-4), G6M-04-01X_Fal18 (680-160018-5), G6M-04-03X_Fal18 (680-160018-6), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), MW-7_Fal18 (680-160018-9), AOC50-DUP05-Fal18 (680-160018-10), G6M-EB04_Fal18 (680-160018-11), G6M-TB06_Fal18 (680-160018-12), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14), AOC50-DUP02-Fal18 (680-160018-15), G6M-13-03X_Fal18 (680-160018-16), XSA-12-96X_Fal18 (680-160018-17), G6M-03-08X_Fal18 (680-160018-18) and G6M-EB05_Fal18 (680-160018-19) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/10/2018, 11/12/2018 and 11/13/2018.

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-547061 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

The continuing calibration verification (CCV) associated with batch 680-547151 recovered above the upper control limit for Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Bromomethane exceeded the RPD limit for the MSD of sample G6M-03-08X_Fal18MSD (680-160018-18) in batch 680-547061.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Samples G6M-97-05B_Fal18 (680-160018-13)[2X], G6M-04-02X_Fal18 (680-160018-14)[2X] and AOC50-DUP02-Fal18 (680-160018-15)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batches 680-547151, and 680-1547304.

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

DISSOLVED GASES

Job ID: 680-160018-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Samples G6M-03-07X_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and AOC50-DUP02-Fal18 (680-160018-15) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/12/2018.

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

METALS (ICP) - DISSOLVED

Samples G6M-02-01X_Fal18 (680-160018-1), MW-3_Fal18 (680-160018-2), G6M-03-07X_Fal18 (680-160018-3), XSA-12-97X_Fal18 (680-160018-4), G6M-04-01X_Fal18 (680-160018-5), G6M-04-03X_Fal18 (680-160018-6), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), MW-7_Fal18 (680-160018-9), AOC50-DUP05-Fal18 (680-160018-10), G6M-EB04_Fal18 (680-160018-11), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14), AOC50-DUP02-Fal18 (680-160018-15), XSA-12-96X_Fal18 (680-160018-17), G6M-03-08X_Fal18 (680-160018-18) and G6M-EB05_Fal18 (680-160018-19) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 11/04/2018 and 11/06/2018 and analyzed on 11/08/2018 and 11/10/2018.

Manganese failed the recovery criteria low for the MSD of sample G6M-03-08X_Fal18MSD (680-160018-18) in batch 680-547169.

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 G6M-02-01X_Fal18 (680-160018-1), MW-3_Fal18 (680-160018-2), G6M-03-07X_Fal18 (680-160018-3), XSA-12-97X_Fal18 (680-160018-4), G6M-04-01X_Fal18 (680-160018-5), G6M-04-03X_Fal18 (680-160018-6), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), MW-7_Fal18 (680-160018-9), AOC50-DUP05-Fal18 (680-160018-10), G6M-EB04_Fal18 (680-160018-11), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14), AOC50-DUP02-Fal18 (680-160018-15), XSA-12-96X_Fal18 (680-160018-17), G6M-03-08X_Fal18 (680-160018-18) and G6M-EB05_Fal18 (680-160018-19) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/04/2018 and 11/06/2018 and analyzed on 11/06/2018 and 11/07/2018.

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

ALKALINITY

Samples G6M-03-07X_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and AOC50-DUP02-Fal18 (680-160018-15) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 11/08/2018, 11/09/2018 and 11/10/2018.

The continuing calibration blank for analytical batch 280-437011 showed total alkalinity greater than one-half the reporting limit (RL). Data has been reported for those samples with total alkalinity below the reporting limit or above 10 times the alkalinity of all associated blanks.

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_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and AOC50-DUP02-Fal18 (680-160018-15) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 11/05/2018.

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

SULFIDE

Samples G6M-03-07X_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and

Job ID: 680-160018-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

AOC50-DUP02-Fal18 (680-160018-15) were analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 11/05/2018.

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_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and AOC50-DUP02-Fal18 (680-160018-15) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 11/14/2018 and 11/15/2018.

Samples G6M-03-07X_Fal18 (680-160018-3)[5X], G6M-13-04X_Fal18 (680-160018-7)[2X], G6M-04-02X_Fal18 (680-160018-14)[2X] and AOC50-DUP02-Fal18 (680-160018-15)[2X] 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-03-07X_Fal18 (680-160018-3), G6M-13-04X_Fal18 (680-160018-7), G6M-13-01X_Fal18 (680-160018-8), AOC50-DUP05-Fal18 (680-160018-10), G6M-97-05B_Fal18 (680-160018-13), G6M-04-02X_Fal18 (680-160018-14) and AOC50-DUP02-Fal18 (680-160018-15) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/07/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-436636/35 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.

Sample G6M-13-01X_Fal18 (680-160018-8)[2X] 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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-160018-1	G6M-02-01X_Fal18	Water	10/29/18 09:15	11/01/18 09:50
680-160018-2	MW-3_Fal18	Water	10/29/18 11:05	11/01/18 09:50
680-160018-3	G6M-03-07X_Fal18	Water	10/29/18 12:55	11/01/18 09:50
680-160018-4	XSA-12-97X_Fal18	Water	10/29/18 09:00	11/01/18 09:50
680-160018-5	G6M-04-01X_Fal18	Water	10/29/18 11:35	11/01/18 09:50
680-160018-6	G6M-04-03X_Fal18	Water	10/29/18 12:40	11/01/18 09:50
680-160018-7	G6M-13-04X_Fal18	Water	10/29/18 09:55	11/01/18 09:50
680-160018-8	G6M-13-01X_Fal18	Water	10/29/18 12:20	11/01/18 09:50
680-160018-9	MW-7_Fal18	Water	10/29/18 14:55	11/01/18 09:50
680-160018-10	AOC50-DUP05-Fal18	Water	10/29/18 12:30	11/01/18 09:50
680-160018-11	G6M-EB04_Fal18	Water	10/29/18 15:30	11/01/18 09:50
680-160018-12	G6M-TB06_Fal18	Water	10/29/18 00:00	11/01/18 09:50
680-160018-13	G6M-97-05B_Fal18	Water	10/30/18 08:40	11/01/18 09:50
680-160018-14	G6M-04-02X_Fal18	Water	10/30/18 12:45	11/01/18 09:50
680-160018-15	AOC50-DUP02-Fal18	Water	10/30/18 12:55	11/01/18 09:50
680-160018-16	G6M-13-03X_Fal18	Water	10/30/18 12:35	11/01/18 09:50
680-160018-17	XSA-12-96X_Fal18	Water	10/31/18 10:50	11/01/18 09:50
680-160018-18	G6M-03-08X_Fal18	Water	10/31/18 12:55	11/01/18 09:50
680-160018-19	G6M-EB05_Fal18	Water	10/31/18 13:10	11/01/18 09:50

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.
D	The reported value is from a dilution.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

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

General Chemistry

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.

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)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit

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)

Client Sample ID: G6M-02-01X_Fal18
Date Collected: 10/29/18 09:15
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:14	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 14:14	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:14	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 14:14	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 14:14	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 14:14	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 14:14	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 14:14	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 14:14	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:14	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 14:14	1
1,2-Dichloroethene, Total	**1.3**	**J**	2.0	1.0	0.74	ug/L		11/10/18 14:14	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 14:14	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 14:14	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 14:14	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 14:14	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 14:14	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:14	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 14:14	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 14:14	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 14:14	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:14	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 14:14	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 14:14	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 14:14	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 14:14	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:14	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 14:14	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 14:14	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:14	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 14:14	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:14	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 14:14	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:14	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 14:14	1
cis-1,2-Dichloroethene	**1.3**		1.0	1.0	0.41	ug/L		11/10/18 14:14	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 14:14	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:14	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 14:14	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 14:14	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:14	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 14:14	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:14	1

Client Sample ID: G6M-02-01X_Fal18

Lab Sample ID: 680-160018-1

Date Collected: 10/29/18 09:15

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 14:14	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:14	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:14	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 14:14	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 14:14	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 14:14	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:14	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 14:14	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:14	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 14:14	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 14:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:14	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:14	1
Trichloroethene	**0.73**	**J**	1.0	1.0	0.48	ug/L		11/10/18 14:14	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:14	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 14:14	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:14	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 14:14*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 14:14*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 14:14*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 14:14*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3100**		50	50	17	ug/L		11/08/18 01:25	1
Manganese	**2700**		10	3.0	1.0	ug/L		11/08/18 01:25	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**51**		3.0	3.0	1.5	ug/L		11/06/18 05:42	1

Client Sample ID: MW-3_Fal18

Lab Sample ID: 680-160018-2

Date Collected: 10/29/18 11:05

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:37	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 14:37	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:37	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 14:37	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 14:37	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 14:37	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 14:37	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: MW-3_Fal18
Date Collected: 10/29/18 11:05
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 14:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 14:37	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:37	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 14:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 14:37	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 14:37	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 14:37	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 14:37	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 14:37	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 14:37	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:37	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 14:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 14:37	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 14:37	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:37	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 14:37	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 14:37	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 14:37	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 14:37	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:37	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 14:37	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 14:37	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 14:37	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:37	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 14:37	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:37	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 14:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 14:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 14:37	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:37	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 14:37	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 14:37	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 14:37	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 14:37	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:37	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 14:37	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 14:37	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 14:37	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 14:37	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 14:37	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 14:37	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:37	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 14:37	1

Client Sample ID: MW-3_Fal18

Lab Sample ID: 680-160018-2

Date Collected: 10/29/18 11:05

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 14:37	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 14:37	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 14:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 14:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:37	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 14:37	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 14:37	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 14:37	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 14:37	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*11/10/18 14:37*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/10/18 14:37*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/10/18 14:37*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 14:37*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**51000**		50	50	17	ug/L		11/08/18 02:23	1
Manganese	**8300**		10	3.0	1.0	ug/L		11/08/18 02:23	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**470**		3.0	3.0	1.5	ug/L		11/06/18 06:27	1

Client Sample ID: G6M-03-07X_Fal18

Lab Sample ID: 680-160018-3

Date Collected: 10/29/18 12:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:00	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 15:00	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:00	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:00	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 15:00	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:00	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 15:00	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:00	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 15:00	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:00	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 15:00	1
1,2-Dichloroethene, Total	**1.2**	**J**	2.0	1.0	0.74	ug/L		11/10/18 15:00	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 15:00	1
1,3,5-Trimethylbenzene	0.50	U M	1.0	0.50	0.31	ug/L		11/10/18 15:00	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:00	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-03-07X_Fal18
Date Collected: 10/29/18 12:55
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:00	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 15:00	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:00	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 15:00	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:00	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 15:00	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:00	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:00	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 15:00	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 15:00	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 15:00	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:00	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:00	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 15:00	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:00	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 15:00	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:00	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 15:00	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:00	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:00	1
cis-1,2-Dichloroethene	**0.55**	**J**	1.0	1.0	0.41	ug/L		11/10/18 15:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:00	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:00	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:00	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 15:00	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:00	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:00	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:00	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 15:00	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:00	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:00	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:00	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:00	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 15:00	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:00	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:00	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:00	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 15:00	1
Toluene	**1.4**		1.0	1.0	0.48	ug/L		11/10/18 15:00	1
trans-1,2-Dichloroethene	**0.66**	**J**	1.0	1.0	0.37	ug/L		11/10/18 15:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:00	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:00	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:00	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 15:00	1
Vinyl chloride	**0.74**	**J**	1.0	1.0	0.50	ug/L		11/10/18 15:00	1

Client Sample ID: G6M-03-07X_Fal18

Lab Sample ID: 680-160018-3

Date Collected: 10/29/18 12:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*11/10/18 15:00*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 15:00*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/10/18 15:00*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 15:00*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**2.8**		1.1	1.1	0.55	ug/L		11/12/18 14:38	1
Ethylene	**19**		1.0	1.0	0.50	ug/L		11/12/18 14:38	1
Methane (TCD)	**37000**		390	77	39	ug/L		11/12/18 14:38	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	5.0	U	5.0	5.0	2.0	mg/L		11/14/18 22:25	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**99000**		50	50	17	ug/L		11/08/18 02:28	1
Manganese	**2100**		10	3.0	1.0	ug/L		11/08/18 02:28	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**420**		3.0	3.0	1.5	ug/L		11/06/18 06:31	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.20**		0.10	0.050	0.019	mg/L		11/05/18 19:38	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**18**		1.0	0.50	0.16	mg/L		11/07/18 01:17	1
Alkalinity	**170**	**B**	5.0	5.0	1.1	mg/L		11/08/18 19:37	1

Client Sample ID: XSA-12-97X_Fal18

Lab Sample ID: 680-160018-4

Date Collected: 10/29/18 09:00

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:23	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 15:23	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:23	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:23	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 15:23	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:23	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 15:23	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:23	1

Client Sample ID: XSA-12-97X_Fal18
Date Collected: 10/29/18 09:00
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 15:23	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:23	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 15:23	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 15:23	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 15:23	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 15:23	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:23	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:23	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 15:23	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:23	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 15:23	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:23	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 15:23	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:23	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:23	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 15:23	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 15:23	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:23	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:23	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:23	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 15:23	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:23	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 15:23	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:23	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 15:23	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:23	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 15:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:23	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:23	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:23	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 15:23	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:23	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:23	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:23	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 15:23	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:23	1
Naphthalene	5.0	U M	5.0	5.0	2.5	ug/L		11/10/18 15:23	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:23	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:23	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 15:23	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:23	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:23	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:23	1
Tetrachloroethene	**6.1**		1.0	1.0	0.74	ug/L		11/10/18 15:23	1

Client Sample ID: XSA-12-97X_Fal18

Lab Sample ID: 680-160018-4

Date Collected: 10/29/18 09:00

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:23	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:23	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:23	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 15:23	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:23	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*11/10/18 15:23*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/10/18 15:23*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 119*		*11/10/18 15:23*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 15:23*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**2300**		50	50	17	ug/L		11/08/18 01:44	1
Manganese	**49**		10	3.0	1.0	ug/L		11/08/18 01:44	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/06/18 05:57	1

Client Sample ID: G6M-04-01X_Fal18

Lab Sample ID: 680-160018-5

Date Collected: 10/29/18 11:35

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:46	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 15:46	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:46	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:46	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 15:46	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:46	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 15:46	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:46	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 15:46	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:46	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 15:46	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 15:46	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 15:46	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 15:46	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:46	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 15:46	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 15:46	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-04-01X_Fal18
Date Collected: 10/29/18 11:35
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:46	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 15:46	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:46	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 15:46	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:46	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:46	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 15:46	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 15:46	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 15:46	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:46	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 15:46	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 15:46	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:46	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 15:46	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:46	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 15:46	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:46	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 15:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 15:46	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:46	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:46	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 15:46	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 15:46	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 15:46	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:46	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 15:46	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 15:46	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 15:46	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 15:46	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 15:46	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 15:46	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:46	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 15:46	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 15:46	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 15:46	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 15:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:46	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 15:46	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 15:46	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 15:46	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 15:46	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 15:46	1

Client Sample ID: G6M-04-01X_Fal18

Lab Sample ID: 680-160018-5

Date Collected: 10/29/18 11:35

Matrix: Water

Date Received: 11/01/18 09:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*11/10/18 15:46*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 15:46*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 15:46*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 15:46*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	68000		50	50	17	ug/L		11/08/18 01:49	1
Manganese	19000		10	3.0	1.0	ug/L		11/08/18 01:49	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	470		3.0	3.0	1.5	ug/L		11/06/18 06:01	1

Client Sample ID: G6M-04-03X_Fal18

Lab Sample ID: 680-160018-6

Date Collected: 10/29/18 12:40

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:10	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 16:10	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:10	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:10	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 16:10	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:10	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 16:10	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:10	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 16:10	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:10	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 16:10	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 16:10	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 16:10	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 16:10	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:10	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:10	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 16:10	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:10	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 16:10	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:10	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 16:10	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:10	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:10	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 16:10	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 16:10	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 16:10	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:10	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:10	1

Client Sample ID: G6M-04-03X_Fal18
Date Collected: 10/29/18 12:40
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 16:10	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:10	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 16:10	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:10	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 16:10	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:10	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:10	1
cis-1,2-Dichloroethene	**0.44**	**J**	1.0	1.0	0.41	ug/L		11/10/18 16:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:10	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:10	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:10	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 16:10	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:10	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:10	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:10	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 16:10	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:10	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:10	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:10	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:10	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 16:10	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:10	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:10	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:10	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 16:10	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:10	1
Trichloroethene	**0.93**	**J**	1.0	1.0	0.48	ug/L		11/10/18 16:10	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:10	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 16:10	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:10	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 16:10*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/10/18 16:10*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/10/18 16:10*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 16:10*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**74000**		50	50	17	ug/L		11/08/18 01:30	1
Manganese	**10000**		10	3.0	1.0	ug/L		11/08/18 01:30	1

Client Sample ID: G6M-04-03X_Fal18 — **Lab Sample ID: 680-160018-6**
Date Collected: 10/29/18 12:40 — **Matrix: Water**
Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**310**		3.0	3.0	1.5	ug/L		11/06/18 05:45	1

Client Sample ID: G6M-13-04X_Fal18 — **Lab Sample ID: 680-160018-7**
Date Collected: 10/29/18 09:55 — **Matrix: Water**
Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:33	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 16:33	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:33	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:33	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 16:33	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:33	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 16:33	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:33	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 16:33	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:33	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 16:33	1
1,2-Dichloroethene, Total	**8.4**		2.0	1.0	0.74	ug/L		11/10/18 16:33	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 16:33	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 16:33	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:33	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:33	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 16:33	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:33	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 16:33	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:33	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 16:33	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:33	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:33	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 16:33	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 16:33	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:33	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:33	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:33	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 16:33	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:33	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 16:33	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:33	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 16:33	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:33	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:33	1
cis-1,2-Dichloroethene	**7.7**		1.0	1.0	0.41	ug/L		11/10/18 16:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:33	1

Client Sample ID: G6M-13-04X_Fal18
Date Collected: 10/29/18 09:55
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:33	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:33	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 16:33	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:33	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:33	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:33	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 16:33	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:33	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:33	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:33	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:33	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 16:33	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:33	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:33	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:33	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 16:33	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:33	1
trans-1,2-Dichloroethene	**0.67**	**J**	1.0	1.0	0.37	ug/L		11/10/18 16:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:33	1
Trichloroethene	**6.9**		1.0	1.0	0.48	ug/L		11/10/18 16:33	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:33	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 16:33	1
Vinyl chloride	**6.1**		1.0	1.0	0.50	ug/L		11/10/18 16:33	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*11/10/18 16:33*	*1*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*		*11/10/18 16:33*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/10/18 16:33*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*11/10/18 16:33*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.8**		1.1	1.1	0.55	ug/L		11/12/18 14:51	1
Ethylene	**4.4**		1.0	1.0	0.50	ug/L		11/12/18 14:51	1
Methane (TCD)	**2700**		390	77	39	ug/L		11/12/18 14:51	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**6.9**	**D**	2.0	2.0	0.80	mg/L		11/14/18 22:38	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**23000**		50	50	17	ug/L		11/08/18 01:35	1
Manganese	**8700**		10	3.0	1.0	ug/L		11/08/18 01:35	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**330**		3.0	3.0	1.5	ug/L		11/06/18 05:49	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.055	J	0.10	0.050	0.019	mg/L		11/05/18 19:40	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	1.5		1.0	0.50	0.16	mg/L		11/07/18 02:01	1
Alkalinity	160	B	5.0	5.0	1.1	mg/L		11/08/18 19:43	1

Client Sample ID: G6M-13-01X_Fal18 — **Lab Sample ID: 680-160018-8**

Date Collected: 10/29/18 12:20 — **Matrix: Water**

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:56	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 16:56	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:56	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:56	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 16:56	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:56	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 16:56	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:56	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 16:56	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:56	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 16:56	1
1,2-Dichloroethene, Total	3.6		2.0	1.0	0.74	ug/L		11/10/18 16:56	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 16:56	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 16:56	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:56	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 16:56	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 16:56	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:56	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 16:56	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:56	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 16:56	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:56	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:56	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 16:56	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 16:56	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 16:56	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:56	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 16:56	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 16:56	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:56	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 16:56	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:56	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 16:56	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:56	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:56	1
cis-1,2-Dichloroethene	3.6		1.0	1.0	0.41	ug/L		11/10/18 16:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 16:56	1

Client Sample ID: G6M-13-01X_Fal18
Date Collected: 10/29/18 12:20
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:56	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:56	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 16:56	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 16:56	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 16:56	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:56	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 16:56	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 16:56	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 16:56	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 16:56	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 16:56	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 16:56	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:56	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 16:56	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 16:56	1
Tetrachloroethene	**0.85**	**J**	1.0	1.0	0.74	ug/L		11/10/18 16:56	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 16:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 16:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:56	1
Trichloroethene	**1.3**		1.0	1.0	0.48	ug/L		11/10/18 16:56	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 16:56	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 16:56	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 16:56	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*11/10/18 16:56*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 16:56*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 16:56*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 16:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 15:04	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 15:04	1
Methane (TCD)	**2300**		390	77	39	ug/L		11/12/18 15:04	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**14**		1.0	1.0	0.40	mg/L		11/14/18 22:51	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1500**		50	50	17	ug/L		11/08/18 01:15	1
Manganese	**200**		10	3.0	1.0	ug/L		11/08/18 01:15	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**13**		3.0	3.0	1.5	ug/L		11/06/18 05:34	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		11/05/18 19:42	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**6.7**		2.0	1.0	0.31	mg/L		11/07/18 02:24	2
Alkalinity	**35**		5.0	5.0	1.1	mg/L		11/10/18 00:00	1

Client Sample ID: MW-7_Fal18

Lab Sample ID: 680-160018-9

Date Collected: 10/29/18 14:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:19	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 17:19	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:19	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 17:19	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 17:19	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 17:19	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 17:19	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 17:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 17:19	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:19	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 17:19	1
1,2-Dichloroethene, Total	**0.95**	**J**	2.0	1.0	0.74	ug/L		11/10/18 17:19	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 17:19	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 17:19	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 17:19	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 17:19	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 17:19	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:19	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 17:19	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 17:19	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 17:19	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:19	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 17:19	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 17:19	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 17:19	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:19	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 17:19	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 17:19	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:19	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 17:19	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:19	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 17:19	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:19	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 17:19	1
cis-1,2-Dichloroethene	**0.95**	**J**	1.0	1.0	0.41	ug/L		11/10/18 17:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 17:19	1

Client Sample ID: MW-7_Fal18

Lab Sample ID: 680-160018-9

Date Collected: 10/29/18 14:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:19	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 17:19	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 17:19	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:19	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 17:19	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:19	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 17:19	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:19	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:19	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 17:19	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 17:19	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 17:19	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:19	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 17:19	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:19	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 17:19	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:19	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:19	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:19	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 17:19	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:19	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 17:19*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/10/18 17:19*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*11/10/18 17:19*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 17:19*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**20000**		50	50	17	ug/L		11/08/18 01:40	1
Manganese	**14000**		10	3.0	1.0	ug/L		11/08/18 01:40	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**250**		3.0	3.0	1.5	ug/L		11/06/18 05:53	1

Client Sample ID: AOC50-DUP05-Fal18

Lab Sample ID: 680-160018-10

Date Collected: 10/29/18 12:30

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 20:02	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 20:02	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: AOC50-DUP05-Fal18
Date Collected: 10/29/18 12:30
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/12/18 20:02	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 20:02	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/12/18 20:02	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/12/18 20:02	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/12/18 20:02	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/12/18 20:02	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/12/18 20:02	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/12/18 20:02	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 20:02	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/12/18 20:02	1
1,2-Dichloroethene, Total	**3.5**		2.0	1.0	0.74	ug/L		11/12/18 20:02	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/12/18 20:02	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/12/18 20:02	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/12/18 20:02	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/12/18 20:02	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/12/18 20:02	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 20:02	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/12/18 20:02	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/12/18 20:02	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/12/18 20:02	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 20:02	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/12/18 20:02	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/12/18 20:02	1
Acetone	10	U M	10	10	7.0	ug/L		11/12/18 20:02	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/12/18 20:02	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 20:02	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/12/18 20:02	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/12/18 20:02	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 20:02	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/12/18 20:02	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 20:02	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/12/18 20:02	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 20:02	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/12/18 20:02	1
cis-1,2-Dichloroethene	**3.5**		1.0	1.0	0.41	ug/L		11/12/18 20:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/12/18 20:02	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 20:02	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/12/18 20:02	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/12/18 20:02	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 20:02	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/12/18 20:02	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 20:02	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/12/18 20:02	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1

Client Sample ID: AOC50-DUP05-Fal18
Date Collected: 10/29/18 12:30
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 20:02	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 20:02	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/12/18 20:02	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/12/18 20:02	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/12/18 20:02	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/12/18 20:02	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/12/18 20:02	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 20:02	1
Tetrachloroethene	**0.84**	**J**	1.0	1.0	0.74	ug/L		11/12/18 20:02	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/12/18 20:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 20:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/12/18 20:02	1
Trichloroethene	**1.4**		1.0	1.0	0.48	ug/L		11/12/18 20:02	1
Trichlorofluoromethane	1.0	U Q	1.0	1.0	0.42	ug/L		11/12/18 20:02	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/12/18 20:02	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 20:02	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/12/18 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/12/18 20:02*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*11/12/18 20:02*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/12/18 20:02*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/12/18 20:02*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 15:17	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 15:17	1
Methane (TCD)	**2300**		390	77	39	ug/L		11/12/18 15:17	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**14**		1.0	1.0	0.40	mg/L		11/15/18 00:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1600**		50	50	17	ug/L		11/08/18 02:33	1
Manganese	**260**		10	3.0	1.0	ug/L		11/08/18 02:33	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**12**		3.0	3.0	1.5	ug/L		11/06/18 06:35	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		11/05/18 19:44	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**4.7**		1.0	0.50	0.16	mg/L		11/07/18 02:39	1
Alkalinity	**36**		5.0	5.0	1.1	mg/L		11/09/18 23:32	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-EB04_Fal18
Date Collected: 10/29/18 15:30
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:28	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 13:28	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:28	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:28	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 13:28	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:28	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 13:28	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:28	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 13:28	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:28	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 13:28	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 13:28	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 13:28	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 13:28	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:28	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:28	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 13:28	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:28	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 13:28	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:28	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 13:28	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:28	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:28	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 13:28	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 13:28	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 13:28	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:28	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:28	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 13:28	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:28	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 13:28	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:28	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 13:28	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:28	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 13:28	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:28	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:28	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:28	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 13:28	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:28	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:28	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:28	1

Client Sample ID: G6M-EB04_Fal18

Lab Sample ID: 680-160018-11

Date Collected: 10/29/18 15:30

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 13:28	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:28	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:28	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:28	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:28	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 13:28	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:28	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:28	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:28	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 13:28	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:28	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:28	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:28	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:28	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 13:28	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:28	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 13:28*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/10/18 13:28*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/10/18 13:28*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 13:28*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**21**	**J**	50	50	17	ug/L		11/08/18 02:13	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/08/18 02:13	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/06/18 06:20	1

Client Sample ID: G6M-TB06_Fal18

Lab Sample ID: 680-160018-12

Date Collected: 10/29/18 00:00

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:51	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 13:51	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:51	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:51	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 13:51	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:51	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 13:51	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-TB06_Fal18
Date Collected: 10/29/18 00:00
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-12
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:51	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 13:51	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:51	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 13:51	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 13:51	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 13:51	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 13:51	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:51	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:51	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 13:51	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:51	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 13:51	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:51	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 13:51	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:51	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:51	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 13:51	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 13:51	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 13:51	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:51	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:51	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 13:51	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:51	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 13:51	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:51	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 13:51	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:51	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 13:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:51	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:51	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:51	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 13:51	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:51	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:51	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:51	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 13:51	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:51	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:51	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:51	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:51	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 13:51	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:51	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:51	1

Client Sample ID: G6M-TB06_Fal18

Lab Sample ID: 680-160018-12

Date Collected: 10/29/18 00:00

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:51	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 13:51	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:51	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:51	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:51	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 13:51	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:51	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 13:51*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 13:51*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/10/18 13:51*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 13:51*	*1*

Client Sample ID: G6M-97-05B_Fal18

Lab Sample ID: 680-160018-13

Date Collected: 10/30/18 08:40

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:38	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:38	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 19:38	2
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.66	ug/L		11/10/18 19:38	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 19:38	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		11/10/18 19:38	2
1,1-Dichloropropene	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 19:38	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		11/10/18 19:38	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
1,2,4-Trimethylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 19:38	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		11/10/18 19:38	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:38	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		11/10/18 19:38	2
1,2-Dichloroethene, Total	**9.6**	**D**	4.0	2.0	1.5	ug/L		11/10/18 19:38	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		11/10/18 19:38	2
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.62	ug/L		11/10/18 19:38	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 19:38	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 19:38	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		11/10/18 19:38	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:38	2
2-Butanone (MEK)	20	U	20	20	6.8	ug/L		11/10/18 19:38	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 19:38	2
2-Hexanone	10	U	20	10	4.0	ug/L		11/10/18 19:38	2
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:38	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 19:38	2
4-Methyl-2-pentanone (MIBK)	10	U	20	10	4.2	ug/L		11/10/18 19:38	2

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-97-05B_Fal18
Date Collected: 10/30/18 08:40
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	20	U	20	20	14	ug/L		11/10/18 19:38	2
Benzene	2.0	U M	2.0	2.0	0.86	ug/L		11/10/18 19:38	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 19:38	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 19:38	2
Bromomethane	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		11/10/18 19:38	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		11/10/18 19:38	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		11/10/18 19:38	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:38	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		11/10/18 19:38	2
Chloroethane	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 19:38	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 19:38	2
cis-1,2-Dichloroethene	**9.6**	**D**	2.0	2.0	0.82	ug/L		11/10/18 19:38	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 19:38	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:38	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 19:38	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 19:38	2
Ethylbenzene	1.0	U	2.0	1.0	0.66	ug/L		11/10/18 19:38	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 19:38	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
Isopropylbenzene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:38	2
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		11/10/18 19:38	2
Methylene Chloride	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
m-Xylene & p-Xylene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:38	2
Naphthalene	10	U	10	10	5.0	ug/L		11/10/18 19:38	2
n-Butylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 19:38	2
N-Propylbenzene	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 19:38	2
o-Xylene	1.0	U	2.0	1.0	0.46	ug/L		11/10/18 19:38	2
sec-Butylbenzene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:38	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 19:38	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:38	2
Tetrachloroethene	**190**	**D**	2.0	2.0	1.5	ug/L		11/10/18 19:38	2
Toluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 19:38	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:38	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:38	2
Trichloroethene	**16**	**D**	2.0	2.0	0.96	ug/L		11/10/18 19:38	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:38	2
Vinyl acetate	4.0	U	4.0	4.0	1.6	ug/L		11/10/18 19:38	2
Vinyl chloride	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 19:38	2
Xylenes, Total	1.0	U	4.0	1.0	0.46	ug/L		11/10/18 19:38	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*11/10/18 19:38*	*2*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/10/18 19:38*	*2*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 19:38*	*2*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 19:38*	*2*

Client Sample ID: G6M-97-05B_Fal18

Lab Sample ID: 680-160018-13

Date Collected: 10/30/18 08:40

Matrix: Water

Date Received: 11/01/18 09:50

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 18:57	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 18:57	1
Methane (TCD)	**530**		390	77	39	ug/L		11/12/18 18:57	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**8.6**		1.0	1.0	0.40	mg/L		11/15/18 00:34	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/08/18 01:20	1
Manganese	**1.5**	**J**	10	3.0	1.0	ug/L		11/08/18 01:20	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/06/18 05:38	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.59**		0.10	0.050	0.019	mg/L		11/05/18 19:46	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**0.58**	**J**	1.0	0.50	0.16	mg/L		11/07/18 02:56	1
Alkalinity	**35**		5.0	5.0	1.1	mg/L		11/09/18 23:54	1

Client Sample ID: G6M-04-02X_Fal18

Lab Sample ID: 680-160018-14

Date Collected: 10/30/18 12:45

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:15	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:15	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 19:15	2
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.66	ug/L		11/10/18 19:15	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 19:15	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		11/10/18 19:15	2
1,1-Dichloropropene	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 19:15	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		11/10/18 19:15	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
1,2,4-Trimethylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 19:15	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		11/10/18 19:15	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:15	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		11/10/18 19:15	2
1,2-Dichloroethene, Total	**27**	**D**	4.0	2.0	1.5	ug/L		11/10/18 19:15	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		11/10/18 19:15	2
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.62	ug/L		11/10/18 19:15	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 19:15	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 19:15	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		11/10/18 19:15	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:15	2

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-04-02X_Fal18
Date Collected: 10/30/18 12:45
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-14
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Butanone (MEK)	20	U	20	20	6.8	ug/L		11/10/18 19:15	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 19:15	2
2-Hexanone	10	U	20	10	4.0	ug/L		11/10/18 19:15	2
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:15	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 19:15	2
4-Methyl-2-pentanone (MIBK)	10	U	20	10	4.2	ug/L		11/10/18 19:15	2
Acetone	20	U	20	20	14	ug/L		11/10/18 19:15	2
Benzene	2.0	U M	2.0	2.0	0.86	ug/L		11/10/18 19:15	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 19:15	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 19:15	2
Bromomethane	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		11/10/18 19:15	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		11/10/18 19:15	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		11/10/18 19:15	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:15	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		11/10/18 19:15	2
Chloroethane	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 19:15	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 19:15	2
cis-1,2-Dichloroethene	**27**	**D**	2.0	2.0	0.82	ug/L		11/10/18 19:15	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 19:15	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:15	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 19:15	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 19:15	2
Ethylbenzene	1.0	U M	2.0	1.0	0.66	ug/L		11/10/18 19:15	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 19:15	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
Isopropylbenzene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:15	2
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		11/10/18 19:15	2
Methylene Chloride	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
m-Xylene & p-Xylene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 19:15	2
Naphthalene	10	U	10	10	5.0	ug/L		11/10/18 19:15	2
n-Butylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 19:15	2
N-Propylbenzene	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 19:15	2
o-Xylene	1.0	U	2.0	1.0	0.46	ug/L		11/10/18 19:15	2
sec-Butylbenzene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:15	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 19:15	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 19:15	2
Tetrachloroethene	**200**	**D**	2.0	2.0	1.5	ug/L		11/10/18 19:15	2
Toluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 19:15	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 19:15	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:15	2
Trichloroethene	**64**	**D**	2.0	2.0	0.96	ug/L		11/10/18 19:15	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 19:15	2
Vinyl acetate	4.0	U	4.0	4.0	1.6	ug/L		11/10/18 19:15	2
Vinyl chloride	**3.0**	**D**	2.0	2.0	1.0	ug/L		11/10/18 19:15	2
Xylenes, Total	1.0	U	4.0	1.0	0.46	ug/L		11/10/18 19:15	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*81 - 118*		*11/10/18 19:15*	*2*

Client Sample ID: G6M-04-02X_Fal18

Lab Sample ID: 680-160018-14

Date Collected: 10/30/18 12:45

Matrix: Water

Date Received: 11/01/18 09:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 19:15*	*2*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 19:15*	*2*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/10/18 19:15*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 19:10	1
Ethylene	**4.1**		1.0	1.0	0.50	ug/L		11/12/18 19:10	1
Methane (TCD)	**14000**		390	77	39	ug/L		11/12/18 19:10	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**9.1**	**D M**	2.0	2.0	0.80	mg/L		11/15/18 00:47	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**45000**		50	50	17	ug/L		11/10/18 01:28	1
Manganese	**14000**		10	3.0	1.0	ug/L		11/10/18 01:28	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**81**		3.0	3.0	1.5	ug/L		11/07/18 21:24	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.13**		0.10	0.050	0.019	mg/L		11/05/18 19:48	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**8.4**		1.0	0.50	0.16	mg/L		11/07/18 03:12	1
Alkalinity	**140**		5.0	5.0	1.1	mg/L		11/09/18 23:46	1

Client Sample ID: AOC50-DUP02-Fal18

Lab Sample ID: 680-160018-15

Date Collected: 10/30/18 12:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 18:51	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 18:51	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 18:51	2
1,1,2-Trichloroethane	1.0	U M	2.0	1.0	0.66	ug/L		11/10/18 18:51	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 18:51	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		11/10/18 18:51	2
1,1-Dichloropropene	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 18:51	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		11/10/18 18:51	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
1,2,4-Trimethylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 18:51	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		11/10/18 18:51	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 18:51	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		11/10/18 18:51	2

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: AOC50-DUP02-Fal18
Date Collected: 10/30/18 12:55
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-15
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloroethene, Total	**27**	**D**	4.0	2.0	1.5	ug/L		11/10/18 18:51	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		11/10/18 18:51	2
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.62	ug/L		11/10/18 18:51	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 18:51	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		11/10/18 18:51	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		11/10/18 18:51	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 18:51	2
2-Butanone (MEK)	20	U	20	20	6.8	ug/L		11/10/18 18:51	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 18:51	2
2-Hexanone	10	U	20	10	4.0	ug/L		11/10/18 18:51	2
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 18:51	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 18:51	2
4-Methyl-2-pentanone (MIBK)	10	U	20	10	4.2	ug/L		11/10/18 18:51	2
Acetone	20	U	20	20	14	ug/L		11/10/18 18:51	2
Benzene	2.0	U M	2.0	2.0	0.86	ug/L		11/10/18 18:51	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 18:51	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		11/10/18 18:51	2
Bromomethane	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		11/10/18 18:51	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		11/10/18 18:51	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		11/10/18 18:51	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 18:51	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		11/10/18 18:51	2
Chloroethane	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		11/10/18 18:51	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 18:51	2
cis-1,2-Dichloroethene	**27**	**D**	2.0	2.0	0.82	ug/L		11/10/18 18:51	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		11/10/18 18:51	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 18:51	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 18:51	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		11/10/18 18:51	2
Ethylbenzene	1.0	U	2.0	1.0	0.66	ug/L		11/10/18 18:51	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		11/10/18 18:51	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
Isopropylbenzene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 18:51	2
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		11/10/18 18:51	2
Methylene Chloride	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
m-Xylene & p-Xylene	2.0	U	2.0	2.0	0.70	ug/L		11/10/18 18:51	2
Naphthalene	10	U	10	10	5.0	ug/L		11/10/18 18:51	2
n-Butylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/10/18 18:51	2
N-Propylbenzene	2.0	U	2.0	2.0	0.76	ug/L		11/10/18 18:51	2
o-Xylene	1.0	U	2.0	1.0	0.46	ug/L		11/10/18 18:51	2
sec-Butylbenzene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 18:51	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		11/10/18 18:51	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		11/10/18 18:51	2
Tetrachloroethene	**250**	**D**	2.0	2.0	1.5	ug/L		11/10/18 18:51	2
Toluene	2.0	U	2.0	2.0	0.96	ug/L		11/10/18 18:51	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		11/10/18 18:51	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 18:51	2

Client Sample ID: AOC50-DUP02-Fal18

Lab Sample ID: 680-160018-15

Date Collected: 10/30/18 12:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Trichloroethene	**72**	**D**	2.0	2.0	0.96	ug/L		11/10/18 18:51	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		11/10/18 18:51	2
Vinyl acetate	4.0	U	4.0	4.0	1.6	ug/L		11/10/18 18:51	2
Vinyl chloride	**2.9**	**D**	2.0	2.0	1.0	ug/L		11/10/18 18:51	2
Xylenes, Total	1.0	U	4.0	1.0	0.46	ug/L		11/10/18 18:51	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*11/10/18 18:51*	*2*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 18:51*	*2*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/10/18 18:51*	*2*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/10/18 18:51*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 19:23	1
Ethylene	**3.9**		1.0	1.0	0.50	ug/L		11/12/18 19:23	1
Methane (TCD)	**11000**		390	77	39	ug/L		11/12/18 19:23	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**9.0**	**D M**	2.0	2.0	0.80	mg/L		11/15/18 01:00	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**40000**		50	50	17	ug/L		11/08/18 01:59	1
Manganese	**13000**		10	3.0	1.0	ug/L		11/08/18 01:59	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**79**		3.0	3.0	1.5	ug/L		11/06/18 06:16	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.14**		0.10	0.050	0.019	mg/L		11/05/18 19:50	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1
Total Organic Carbon - Duplicates	**8.5**		1.0	0.50	0.16	mg/L		11/07/18 03:27	1
Alkalinity	**150**		5.0	5.0	1.1	mg/L		11/09/18 23:39	1

Client Sample ID: G6M-13-03X_Fal18

Lab Sample ID: 680-160018-16

Date Collected: 10/30/18 12:35

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:42	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 17:42	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:42	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 17:42	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 17:42	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 17:42	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-13-03X_Fal18
Date Collected: 10/30/18 12:35
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-16
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 17:42	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 17:42	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 17:42	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:42	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 17:42	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 17:42	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 17:42	1
1,3,5-Trimethylbenzene	0.50	U M	1.0	0.50	0.31	ug/L		11/10/18 17:42	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 17:42	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 17:42	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 17:42	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:42	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 17:42	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 17:42	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 17:42	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:42	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:42	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 17:42	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 17:42	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 17:42	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:42	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 17:42	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 17:42	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:42	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 17:42	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:42	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 17:42	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:42	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 17:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 17:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 17:42	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:42	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 17:42	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 17:42	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 17:42	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 17:42	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:42	1
Methyl tert-butyl ether	**0.92**	**J**	10	0.50	0.30	ug/L		11/10/18 17:42	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 17:42	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 17:42	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 17:42	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 17:42	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 17:42	1

Client Sample ID: G6M-13-03X_Fal18

Lab Sample ID: 680-160018-16

Date Collected: 10/30/18 12:35

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:42	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 17:42	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 17:42	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 17:42	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 17:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:42	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 17:42	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 17:42	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 17:42	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 17:42	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*11/10/18 17:42*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/10/18 17:42*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*11/10/18 17:42*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 17:42*	*1*

Client Sample ID: XSA-12-96X_Fal18

Lab Sample ID: 680-160018-17

Date Collected: 10/31/18 10:50

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 18:05	1
1,1,2-Trichloroethane	0.50	U M	1.0	0.50	0.33	ug/L		11/10/18 18:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 18:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 18:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 18:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 18:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 18:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 18:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 18:05	1
1,2-Dichloroethene, Total	**24**		2.0	1.0	0.74	ug/L		11/10/18 18:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 18:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 18:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 18:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 18:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 18:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 18:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 18:05	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 18:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:05	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: XSA-12-96X_Fal18
Date Collected: 10/31/18 10:50
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-17
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 18:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 18:05	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 18:05	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 18:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 18:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 18:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 18:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 18:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 18:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 18:05	1
Chloroethane	**3.0**	**J**	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 18:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 18:05	1
cis-1,2-Dichloroethene	**21**		1.0	1.0	0.41	ug/L		11/10/18 18:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 18:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 18:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 18:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 18:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 18:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 18:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 18:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 18:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 18:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 18:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:05	1
Tetrachloroethene	**24**		1.0	1.0	0.74	ug/L		11/10/18 18:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 18:05	1
trans-1,2-Dichloroethene	**3.2**		1.0	1.0	0.37	ug/L		11/10/18 18:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:05	1
Trichloroethene	**9.1**		1.0	1.0	0.48	ug/L		11/10/18 18:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:05	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 18:05	1
Vinyl chloride	**4.7**		1.0	1.0	0.50	ug/L		11/10/18 18:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*11/10/18 18:05*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 18:05*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*11/10/18 18:05*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 18:05*	*1*

Client Sample ID: XSA-12-96X_Fal18

Lab Sample ID: 680-160018-17

Date Collected: 10/31/18 10:50

Matrix: Water

Date Received: 11/01/18 09:50

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	5100		50	50	17	ug/L		11/08/18 02:18	1
Manganese	10000		10	3.0	1.0	ug/L		11/08/18 02:18	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	2.9	J	3.0	3.0	1.5	ug/L		11/06/18 06:24	1

Client Sample ID: G6M-03-08X_Fal18

Lab Sample ID: 680-160018-18

Date Collected: 10/31/18 12:55

Matrix: Water

Date Received: 11/01/18 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:28	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 18:28	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 18:28	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 18:28	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 18:28	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 18:28	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 18:28	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 18:28	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 18:28	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:28	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 18:28	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 18:28	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 18:28	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 18:28	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 18:28	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 18:28	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 18:28	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:28	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 18:28	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 18:28	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 18:28	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:28	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 18:28	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 18:28	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 18:28	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/10/18 18:28	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 18:28	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 18:28	1
Bromomethane	5.0	U J1	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 18:28	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 18:28	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 18:28	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:28	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 18:28	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-03-08X_Fal18
Date Collected: 10/31/18 12:55
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-18
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 18:28	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 18:28	1
cis-1,2-Dichloroethene	**0.60**	**J**	1.0	1.0	0.41	ug/L		11/10/18 18:28	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 18:28	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:28	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 18:28	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 18:28	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 18:28	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 18:28	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:28	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 18:28	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 18:28	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 18:28	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 18:28	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 18:28	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 18:28	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:28	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 18:28	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 18:28	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 18:28	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 18:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 18:28	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:28	1
Trichloroethene	1.0	U M	1.0	1.0	0.48	ug/L		11/10/18 18:28	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 18:28	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 18:28	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 18:28	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*11/10/18 18:28*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/10/18 18:28*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/10/18 18:28*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/10/18 18:28*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**270**		50	50	17	ug/L		11/10/18 00:54	1
Manganese	**7300**	**J1**	10	3.0	1.0	ug/L		11/10/18 00:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**8.6**		3.0	3.0	1.5	ug/L		11/07/18 21:05	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-EB05_Fal18
Date Collected: 10/31/18 13:10
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-19
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 12:43	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 12:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/13/18 12:43	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 12:43	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/13/18 12:43	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/13/18 12:43	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/13/18 12:43	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/13/18 12:43	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/13/18 12:43	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/13/18 12:43	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 12:43	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/13/18 12:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/13/18 12:43	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/13/18 12:43	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/13/18 12:43	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/13/18 12:43	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/13/18 12:43	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/13/18 12:43	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 12:43	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/13/18 12:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/13/18 12:43	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/13/18 12:43	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 12:43	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 12:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/13/18 12:43	1
Acetone	**8.4**	**J**	10	10	7.0	ug/L		11/13/18 12:43	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/13/18 12:43	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 12:43	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/13/18 12:43	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/13/18 12:43	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 12:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/13/18 12:43	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 12:43	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/13/18 12:43	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 12:43	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/13/18 12:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/13/18 12:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/13/18 12:43	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 12:43	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/13/18 12:43	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/13/18 12:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 12:43	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/13/18 12:43	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 12:43	1

Client Sample ID: G6M-EB05_Fal18
Date Collected: 10/31/18 13:10
Date Received: 11/01/18 09:50

Lab Sample ID: 680-160018-19
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/13/18 12:43	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 12:43	1
Naphthalene	5.0	U M	5.0	5.0	2.5	ug/L		11/13/18 12:43	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/13/18 12:43	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/13/18 12:43	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/13/18 12:43	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 12:43	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/13/18 12:43	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 12:43	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/13/18 12:43	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 12:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 12:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 12:43	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 12:43	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 12:43	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/13/18 12:43	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 12:43	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/13/18 12:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*11/13/18 12:43*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/13/18 12:43*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*11/13/18 12:43*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/13/18 12:43*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/08/18 01:54	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/08/18 01:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/06/18 06:05	1

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-160018-1	G6M-02-01X_Fal18	103	92	106	100
680-160018-2	MW-3_Fal18	105	94	105	101
680-160018-3	G6M-03-07X_Fal18	106	92	105	100
680-160018-4	XSA-12-97X_Fal18	107	94	108	100
680-160018-5	G6M-04-01X_Fal18	106	92	106	101
680-160018-6	G6M-04-03X_Fal18	103	93	105	101
680-160018-7	G6M-13-04X_Fal18	105	90	104	99
680-160018-8	G6M-13-01X_Fal18	104	92	106	100
680-160018-9	MW-7_Fal18	103	93	103	100
680-160018-10	AOC50-DUP05-Fal18	99	96	98	101
680-160018-11	G6M-EB04_Fal18	103	91	104	101
680-160018-12	G6M-TB06_Fal18	103	92	104	100
680-160018-13	G6M-97-05B_Fal18	107	91	106	101
680-160018-14	G6M-04-02X_Fal18	109	92	106	98
680-160018-15	AOC50-DUP02-Fal18	107	92	105	98
680-160018-16	G6M-13-03X_Fal18	105	91	105	101
680-160018-17	XSA-12-96X_Fal18	101	92	103	101
680-160018-18	G6M-03-08X_Fal18	105	91	106	101
680-160018-18 MS	G6M-03-08X_Fal18	95	90	97	104
680-160018-18 MSD	G6M-03-08X_Fal18	94	93	96	101
680-160018-19	G6M-EB05_Fal18	102	93	102	100
LCS 680-547061/4	Lab Control Sample	98	91	97	98
LCS 680-547151/4	Lab Control Sample	95	90	94	95
LCS 680-547304/4	Lab Control Sample	96	92	96	98
LCSD 680-547061/5	Lab Control Sample Dup	96	91	98	99
LCSD 680-547151/5	Lab Control Sample Dup	98	95	100	102
LCSD 680-547304/5	Lab Control Sample Dup	99	93	98	101
MB 680-547061/10	Method Blank	103	92	104	100
MB 680-547151/10	Method Blank	101	93	102	100
MB 680-547304/10	Method Blank	104	92	106	102

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

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

Lab Sample ID: MB 680-547061/10
Matrix: Water
Analysis Batch: 547061

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/10/18 13:05	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/10/18 13:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/10/18 13:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/10/18 13:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/10/18 13:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/10/18 13:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/10/18 13:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/10/18 13:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/10/18 13:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/10/18 13:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/10/18 13:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:05	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/10/18 13:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:05	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/10/18 13:05	1
Acetone	10	U	10	10	7.0	ug/L		11/10/18 13:05	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/10/18 13:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/10/18 13:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/10/18 13:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/10/18 13:05	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/10/18 13:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/10/18 13:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/10/18 13:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/10/18 13:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/10/18 13:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1

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

Lab Sample ID: MB 680-547061/10
Matrix: Water
Analysis Batch: 547061

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/10/18 13:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/10/18 13:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/10/18 13:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/10/18 13:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/10/18 13:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/10/18 13:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/10/18 13:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/10/18 13:05	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/10/18 13:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/10/18 13:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:05	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/10/18 13:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/10/18 13:05	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/10/18 13:05	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/10/18 13:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/10/18 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/10/18 13:05*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/10/18 13:05*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/10/18 13:05*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/10/18 13:05*	*1*

Lab Sample ID: LCS 680-547061/4
Matrix: Water
Analysis Batch: 547061

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	50.1		ug/L		100	78 - 124
1,1,1-Trichloroethane	50.0	52.3		ug/L		105	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/L		107	71 - 121
1,1,2-Trichloroethane	50.0	48.0		ug/L		96	80 - 119
1,1-Dichloroethane	50.0	50.4		ug/L		101	77 - 125
1,1-Dichloroethene	50.0	51.1		ug/L		102	71 - 131
1,1-Dichloropropene	50.0	51.8		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	50.0	47.8		ug/L		96	69 - 129
1,2,3-Trichloropropane	50.0	52.7		ug/L		105	73 - 122
1,2,4-Trichlorobenzene	50.0	48.3		ug/L		97	69 - 130
1,2,4-Trimethylbenzene	50.0	50.1		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	49.5		ug/L		99	62 - 128
1,2-Dichlorobenzene	50.0	51.0		ug/L		102	80 - 119
1,2-Dichloroethane	50.0	50.6		ug/L		101	73 - 128
1,2-Dichloroethene, Total	100	95.8		ug/L		96	79 - 121
1,2-Dichloropropane	50.0	47.7		ug/L		95	78 - 122

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

Lab Sample ID: LCS 680-547061/4
Matrix: Water
Analysis Batch: 547061

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	50.7		ug/L		101	75 - 124
1,3-Dichlorobenzene	50.0	52.9		ug/L		106	80 - 119
1,3-Dichloropropane	50.0	50.9		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	51.2		ug/L		102	79 - 118
2,2-Dichloropropane	50.0	55.9		ug/L		112	60 - 139
2-Butanone (MEK)	250	250		ug/L		100	56 - 143
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122
2-Hexanone	250	236		ug/L		94	57 - 139
4-Chlorotoluene	50.0	50.7		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	51.2		ug/L		102	77 - 127
4-Methyl-2-pentanone (MIBK)	250	237		ug/L		95	67 - 130
Acetone	250	235		ug/L		94	39 - 160
Benzene	50.0	48.7		ug/L		97	79 - 120
Bromobenzene	50.0	49.2		ug/L		98	80 - 120
Bromoform	50.0	40.6		ug/L		81	66 - 130
Bromomethane	50.0	64.0		ug/L		128	53 - 141
Carbon disulfide	50.0	49.5		ug/L		99	64 - 133
Carbon tetrachloride	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	50.0	49.1		ug/L		98	82 - 118
Chlorobromomethane	50.0	46.0		ug/L		92	78 - 123
Chlorodibromomethane	50.0	45.2		ug/L		90	74 - 126
Chloroethane	50.0	52.9		ug/L		106	60 - 138
Chloroform	50.0	50.2		ug/L		100	79 - 124
Chloromethane	50.0	51.8	M	ug/L		104	50 - 139
cis-1,2-Dichloroethene	50.0	48.0		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	48.1		ug/L		96	75 - 124
Dibromomethane	50.0	51.4		ug/L		103	79 - 123
Dichlorobromomethane	50.0	48.2		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	60.2		ug/L		120	32 - 152
Ethylbenzene	50.0	51.9		ug/L		104	79 - 121
Ethylene Dibromide	50.0	50.2		ug/L		100	75 - 127
Hexachlorobutadiene	50.0	49.9		ug/L		100	66 - 134
Isopropylbenzene	50.0	51.2		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	48.7		ug/L		97	71 - 124
Methylene Chloride	50.0	50.2		ug/L		100	74 - 124
m-Xylene & p-Xylene	50.0	50.3		ug/L		101	80 - 121
Naphthalene	50.0	55.2		ug/L		110	61 - 128
n-Butylbenzene	50.0	55.0		ug/L		110	75 - 128
N-Propylbenzene	50.0	52.0		ug/L		104	76 - 126
o-Xylene	50.0	50.3		ug/L		101	78 - 122
sec-Butylbenzene	50.0	52.0		ug/L		104	77 - 126
Styrene	50.0	51.3		ug/L		103	78 - 123
tert-Butylbenzene	50.0	49.9		ug/L		100	78 - 124
Tetrachloroethene	50.0	49.9		ug/L		100	74 - 129
Toluene	50.0	47.0		ug/L		94	80 - 121
trans-1,2-Dichloroethene	50.0	47.8		ug/L		96	75 - 124
trans-1,3-Dichloropropene	50.0	49.3		ug/L		99	73 - 127
Trichloroethene	50.0	47.6		ug/L		95	79 - 123

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

Lab Sample ID: LCS 680-547061/4
Matrix: Water
Analysis Batch: 547061

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	58.3		ug/L		117	65 - 141
Vinyl acetate	100	111		ug/L		111	54 - 146
Vinyl chloride	50.0	52.7		ug/L		105	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

Lab Sample ID: LCSD 680-547061/5
Matrix: Water
Analysis Batch: 547061

Client Sample 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	50.9		ug/L		102	78 - 124	2	20
1,1,1-Trichloroethane	50.0	51.7		ug/L		103	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.4		ug/L		105	71 - 121	2	20
1,1,2-Trichloroethane	50.0	48.8		ug/L		98	80 - 119	2	20
1,1-Dichloroethane	50.0	48.1		ug/L		96	77 - 125	5	20
1,1-Dichloroethene	50.0	52.9		ug/L		106	71 - 131	3	20
1,1-Dichloropropene	50.0	53.7		ug/L		107	79 - 125	4	20
1,2,3-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 129	0	20
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	73 - 122	0	20
1,2,4-Trichlorobenzene	50.0	48.7		ug/L		97	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	49.8		ug/L		100	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	47.8		ug/L		96	62 - 128	3	20
1,2-Dichlorobenzene	50.0	50.6		ug/L		101	80 - 119	1	20
1,2-Dichloroethane	50.0	49.9		ug/L		100	73 - 128	1	20
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121	6	20
1,2-Dichloropropane	50.0	47.9		ug/L		96	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	51.2		ug/L		102	75 - 124	1	20
1,3-Dichlorobenzene	50.0	53.0		ug/L		106	80 - 119	0	20
1,3-Dichloropropane	50.0	50.5		ug/L		101	80 - 119	1	20
1,4-Dichlorobenzene	50.0	51.2		ug/L		102	79 - 118	0	20
2,2-Dichloropropane	50.0	57.3		ug/L		115	60 - 139	2	20
2-Butanone (MEK)	250	229		ug/L		92	56 - 143	8	20
2-Chlorotoluene	50.0	51.1		ug/L		102	79 - 122	1	20
2-Hexanone	250	233		ug/L		93	57 - 139	1	20
4-Chlorotoluene	50.0	50.7		ug/L		101	78 - 122	0	20
4-Isopropyltoluene	50.0	52.5		ug/L		105	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)	250	231		ug/L		93	67 - 130	3	20
Acetone	250	232		ug/L		93	39 - 160	1	20
Benzene	50.0	49.5		ug/L		99	79 - 120	2	20
Bromobenzene	50.0	48.9		ug/L		98	80 - 120	0	20
Bromoform	50.0	39.9		ug/L		80	66 - 130	2	20
Bromomethane	50.0	64.5		ug/L		129	53 - 141	1	20

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

Lab Sample ID: LCSD 680-547061/5
Matrix: Water
Analysis Batch: 547061

Client Sample 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 disulfide			50.0	51.6		ug/L		103	64 - 133	4	20
Carbon tetrachloride			50.0	50.2		ug/L		100	72 - 136	2	20
Chlorobenzene			50.0	49.1		ug/L		98	82 - 118	0	20
Chlorobromomethane			50.0	45.0		ug/L		90	78 - 123	2	20
Chlorodibromomethane			50.0	45.7		ug/L		91	74 - 126	1	20
Chloroethane			50.0	50.0		ug/L		100	60 - 138	6	20
Chloroform			50.0	50.5		ug/L		101	79 - 124	1	20
Chloromethane			50.0	52.6	M	ug/L		105	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	48.7		ug/L		97	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	47.3		ug/L		95	75 - 124	2	20
Dibromomethane			50.0	51.3		ug/L		103	79 - 123	0	20
Dichlorobromomethane			50.0	48.3		ug/L		97	79 - 125	0	20
Dichlorodifluoromethane			50.0	60.3		ug/L		121	32 - 152	0	20
Ethylbenzene			50.0	52.5		ug/L		105	79 - 121	1	20
Ethylene Dibromide			50.0	50.6		ug/L		101	75 - 127	1	20
Hexachlorobutadiene			50.0	47.6		ug/L		95	66 - 134	5	20
Isopropylbenzene			50.0	52.0		ug/L		104	72 - 131	2	20
Methyl tert-butyl ether			50.0	49.1		ug/L		98	71 - 124	1	20
Methylene Chloride			50.0	49.7		ug/L		99	74 - 124	1	20
m-Xylene & p-Xylene			50.0	51.3		ug/L		103	80 - 121	2	20
Naphthalene			50.0	55.4		ug/L		111	61 - 128	0	20
n-Butylbenzene			50.0	55.4		ug/L		111	75 - 128	1	20
N-Propylbenzene			50.0	52.8		ug/L		106	76 - 126	2	20
o-Xylene			50.0	50.2		ug/L		100	78 - 122	0	20
sec-Butylbenzene			50.0	52.9		ug/L		106	77 - 126	2	20
Styrene			50.0	51.7		ug/L		103	78 - 123	1	20
tert-Butylbenzene			50.0	50.3		ug/L		101	78 - 124	1	20
Tetrachloroethene			50.0	52.0		ug/L		104	74 - 129	4	20
Toluene			50.0	47.6		ug/L		95	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	52.7		ug/L		105	75 - 124	10	20
trans-1,3-Dichloropropene			50.0	48.6		ug/L		97	73 - 127	2	20
Trichloroethene			50.0	48.7		ug/L		97	79 - 123	2	20
Trichlorofluoromethane			50.0	58.6		ug/L		117	65 - 141	0	20
Vinyl acetate			100	110		ug/L		110	54 - 146	2	20
Vinyl chloride			50.0	54.8		ug/L		110	58 - 137	4	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

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

Lab Sample ID: 680-160018-18 MS
Matrix: Water
Analysis Batch: 547061

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	1.0	U	50.0	50.6		ug/L		101	78 - 124
1,1,1-Trichloroethane	1.0	U	50.0	53.3		ug/L		107	74 - 131
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.1		ug/L		108	71 - 121
1,1,2-Trichloroethane	0.50	U	50.0	45.8		ug/L		92	80 - 119
1,1-Dichloroethane	1.0	U	50.0	51.3		ug/L		103	77 - 125
1,1-Dichloroethene	1.0	U	50.0	56.7		ug/L		113	71 - 131
1,1-Dichloropropene	1.0	U	50.0	55.2		ug/L		110	79 - 125
1,2,3-Trichlorobenzene	5.0	U	50.0	42.5		ug/L		85	69 - 129
1,2,3-Trichloropropane	1.0	U	50.0	51.5		ug/L		103	73 - 122
1,2,4-Trichlorobenzene	5.0	U	50.0	43.8		ug/L		88	69 - 130
1,2,4-Trimethylbenzene	1.0	U	50.0	50.0		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	46.7		ug/L		93	62 - 128
1,2-Dichlorobenzene	1.0	U	50.0	50.6		ug/L		101	80 - 119
1,2-Dichloroethane	1.0	U M	50.0	48.2		ug/L		96	73 - 128
1,2-Dichloroethene, Total	1.0	U	100	96.3		ug/L		96	79 - 121
1,2-Dichloropropane	1.0	U	50.0	47.3		ug/L		95	78 - 122
1,3,5-Trimethylbenzene	0.50	U	50.0	51.4		ug/L		103	75 - 124
1,3-Dichlorobenzene	1.0	U	50.0	53.3		ug/L		107	80 - 119
1,3-Dichloropropane	1.0	U	50.0	48.1		ug/L		96	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	51.2		ug/L		102	79 - 118
2,2-Dichloropropane	1.0	U	50.0	47.5		ug/L		95	60 - 139
2-Butanone (MEK)	10	U	250	210		ug/L		84	56 - 143
2-Chlorotoluene	0.50	U	50.0	53.1		ug/L		106	79 - 122
2-Hexanone	5.0	U	250	216		ug/L		86	57 - 139
4-Chlorotoluene	1.0	U	50.0	51.7		ug/L		103	78 - 122
4-Isopropyltoluene	1.0	U	50.0	52.7		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U	250	220		ug/L		88	67 - 130
Acetone	10	U	250	228		ug/L		91	39 - 160
Benzene	1.0	U M	50.0	49.8		ug/L		100	79 - 120
Bromobenzene	1.0	U	50.0	48.6		ug/L		97	80 - 120
Bromoform	1.0	U	50.0	39.7		ug/L		79	66 - 130
Bromomethane	5.0	U J1	50.0	46.8		ug/L		94	53 - 141
Carbon disulfide	2.0	U	50.0	53.0		ug/L		106	64 - 133
Carbon tetrachloride	0.50	U	50.0	51.7		ug/L		103	72 - 136
Chlorobenzene	0.50	U	50.0	49.5		ug/L		99	82 - 118
Chlorobromomethane	1.0	U	50.0	43.3		ug/L		87	78 - 123
Chlorodibromomethane	0.50	U	50.0	43.0		ug/L		86	74 - 126
Chloroethane	5.0	U	50.0	54.8		ug/L		110	60 - 138
Chloroform	1.0	U	50.0	51.2		ug/L		102	79 - 124
Chloromethane	1.0	U	50.0	54.5	M	ug/L		109	50 - 139
cis-1,2-Dichloroethene	0.60	J	50.0	47.2		ug/L		93	78 - 123
cis-1,3-Dichloropropene	1.0	U	50.0	43.8		ug/L		88	75 - 124
Dibromomethane	1.0	U	50.0	49.4		ug/L		99	79 - 123
Dichlorobromomethane	1.0	U	50.0	47.2		ug/L		94	79 - 125
Dichlorodifluoromethane	1.0	U	50.0	63.6		ug/L		127	32 - 152
Ethylbenzene	0.50	U	50.0	54.0		ug/L		108	79 - 121
Ethylene Dibromide	1.0	U	50.0	47.3		ug/L		95	75 - 127
Hexachlorobutadiene	5.0	U	50.0	44.2		ug/L		88	66 - 134

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

Lab Sample ID: 680-160018-18 MS
Matrix: Water
Analysis Batch: 547061

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	1.0	U	50.0	53.6		ug/L		107	72 - 131
Methyl tert-butyl ether	0.50	U	50.0	42.5		ug/L		85	71 - 124
Methylene Chloride	5.0	U	50.0	48.8		ug/L		98	74 - 124
m-Xylene & p-Xylene	1.0	U	50.0	52.4		ug/L		105	80 - 121
Naphthalene	5.0	U	50.0	50.6		ug/L		101	61 - 128
n-Butylbenzene	1.0	U	50.0	55.3		ug/L		111	75 - 128
N-Propylbenzene	1.0	U	50.0	54.3		ug/L		109	76 - 126
o-Xylene	0.50	U	50.0	51.1		ug/L		102	78 - 122
sec-Butylbenzene	1.0	U	50.0	53.2		ug/L		106	77 - 126
Styrene	0.50	U	50.0	52.6		ug/L		105	78 - 123
tert-Butylbenzene	1.0	U	50.0	51.9		ug/L		104	78 - 124
Tetrachloroethene	1.0	U	50.0	50.6		ug/L		101	74 - 129
Toluene	1.0	U	50.0	47.5		ug/L		95	80 - 121
trans-1,2-Dichloroethene	1.0	U	50.0	49.1		ug/L		98	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	44.5		ug/L		89	73 - 127
Trichloroethene	1.0	U M	50.0	47.8		ug/L		96	79 - 123
Trichlorofluoromethane	1.0	U	50.0	61.1		ug/L		122	65 - 141
Vinyl acetate	2.0	U	100	92.9		ug/L		93	54 - 146
Vinyl chloride	1.0	U	50.0	56.3		ug/L		113	58 - 137
Xylenes, Total	0.50	U	100	104		ug/L		104	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: 680-160018-18 MSD
Matrix: Water
Analysis Batch: 547061

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1.0	U	50.0	51.0		ug/L		102	78 - 124	1	20
1,1,1-Trichloroethane	1.0	U	50.0	51.9		ug/L		104	74 - 131	3	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.1		ug/L		108	71 - 121	0	20
1,1,2-Trichloroethane	0.50	U	50.0	46.8		ug/L		94	80 - 119	2	20
1,1-Dichloroethane	1.0	U	50.0	50.4		ug/L		101	77 - 125	2	20
1,1-Dichloroethene	1.0	U	50.0	53.7		ug/L		107	71 - 131	6	20
1,1-Dichloropropene	1.0	U	50.0	53.5		ug/L		107	79 - 125	3	20
1,2,3-Trichlorobenzene	5.0	U	50.0	45.3		ug/L		91	69 - 129	7	20
1,2,3-Trichloropropane	1.0	U	50.0	51.1		ug/L		102	73 - 122	1	20
1,2,4-Trichlorobenzene	5.0	U	50.0	44.9		ug/L		90	69 - 130	2	20
1,2,4-Trimethylbenzene	1.0	U	50.0	49.5		ug/L		99	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	47.1		ug/L		94	62 - 128	1	20
1,2-Dichlorobenzene	1.0	U	50.0	51.2		ug/L		102	80 - 119	1	20
1,2-Dichloroethane	1.0	U M	50.0	48.1		ug/L		96	73 - 128	0	20
1,2-Dichloroethene, Total	1.0	U	100	95.2		ug/L		95	79 - 121	1	20
1,2-Dichloropropane	1.0	U	50.0	46.6		ug/L		93	78 - 122	1	20

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

Lab Sample ID: 680-160018-18 MSD
Matrix: Water
Analysis Batch: 547061

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	0.50	U	50.0	50.4		ug/L		101	75 - 124	2	20
1,3-Dichlorobenzene	1.0	U	50.0	53.2		ug/L		106	80 - 119	0	20
1,3-Dichloropropane	1.0	U	50.0	48.1		ug/L		96	80 - 119	0	20
1,4-Dichlorobenzene	1.0	U	50.0	51.0		ug/L		102	79 - 118	0	20
2,2-Dichloropropane	1.0	U	50.0	45.6		ug/L		91	60 - 139	4	20
2-Butanone (MEK)	10	U	250	230		ug/L		92	56 - 143	9	20
2-Chlorotoluene	0.50	U	50.0	51.8		ug/L		104	79 - 122	3	20
2-Hexanone	5.0	U	250	220		ug/L		88	57 - 139	2	20
4-Chlorotoluene	1.0	U	50.0	51.2		ug/L		102	78 - 122	1	20
4-Isopropyltoluene	1.0	U	50.0	52.8		ug/L		106	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	5.0	U	250	225		ug/L		90	67 - 130	2	20
Acetone	10	U	250	209		ug/L		84	39 - 160	9	20
Benzene	1.0	U M	50.0	49.4		ug/L		99	79 - 120	1	20
Bromobenzene	1.0	U	50.0	48.9		ug/L		98	80 - 120	1	20
Bromoform	1.0	U	50.0	39.7		ug/L		79	66 - 130	0	20
Bromomethane	5.0	U J1	50.0	57.9	J1	ug/L		116	53 - 141	21	20
Carbon disulfide	2.0	U	50.0	52.7		ug/L		105	64 - 133	0	20
Carbon tetrachloride	0.50	U	50.0	50.6		ug/L		101	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	49.2		ug/L		98	82 - 118	1	20
Chlorobromomethane	1.0	U	50.0	43.9		ug/L		88	78 - 123	1	20
Chlorodibromomethane	0.50	U	50.0	43.7		ug/L		87	74 - 126	2	20
Chloroethane	5.0	U	50.0	54.8		ug/L		110	60 - 138	0	20
Chloroform	1.0	U	50.0	50.1		ug/L		100	79 - 124	2	20
Chloromethane	1.0	U	50.0	53.5	M	ug/L		107	50 - 139	2	20
cis-1,2-Dichloroethene	0.60	J	50.0	46.8		ug/L		92	78 - 123	1	20
cis-1,3-Dichloropropene	1.0	U	50.0	44.0		ug/L		88	75 - 124	0	20
Dibromomethane	1.0	U	50.0	48.6		ug/L		97	79 - 123	2	20
Dichlorobromomethane	1.0	U	50.0	47.3		ug/L		95	79 - 125	0	20
Dichlorodifluoromethane	1.0	U	50.0	63.3		ug/L		127	32 - 152	1	20
Ethylbenzene	0.50	U	50.0	53.2		ug/L		106	79 - 121	2	20
Ethylene Dibromide	1.0	U	50.0	47.7		ug/L		95	75 - 127	1	20
Hexachlorobutadiene	5.0	U	50.0	46.9		ug/L		94	66 - 134	6	20
Isopropylbenzene	1.0	U	50.0	52.8		ug/L		106	72 - 131	2	20
Methyl tert-butyl ether	0.50	U	50.0	46.5		ug/L		93	71 - 124	9	20
Methylene Chloride	5.0	U	50.0	47.8		ug/L		96	74 - 124	2	20
m-Xylene & p-Xylene	1.0	U	50.0	51.2		ug/L		102	80 - 121	2	20
Naphthalene	5.0	U	50.0	53.5		ug/L		107	61 - 128	6	20
n-Butylbenzene	1.0	U	50.0	54.1		ug/L		108	75 - 128	2	20
N-Propylbenzene	1.0	U	50.0	53.2		ug/L		106	76 - 126	2	20
o-Xylene	0.50	U	50.0	51.2		ug/L		102	78 - 122	0	20
sec-Butylbenzene	1.0	U	50.0	52.6		ug/L		105	77 - 126	1	20
Styrene	0.50	U	50.0	52.1		ug/L		104	78 - 123	1	20
tert-Butylbenzene	1.0	U	50.0	51.0		ug/L		102	78 - 124	2	20
Tetrachloroethene	1.0	U	50.0	50.9		ug/L		102	74 - 129	0	20
Toluene	1.0	U	50.0	48.0		ug/L		96	80 - 121	1	20
trans-1,2-Dichloroethene	1.0	U	50.0	48.4		ug/L		97	75 - 124	1	20
trans-1,3-Dichloropropene	1.0	U	50.0	45.3		ug/L		91	73 - 127	2	20
Trichloroethene	1.0	U M	50.0	48.3		ug/L		97	79 - 123	1	20

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

Lab Sample ID: 680-160018-18 MSD
Matrix: Water
Analysis Batch: 547061

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	1.0	U	50.0	59.8		ug/L		120	65 - 141	2	20
Vinyl acetate	2.0	U	100	92.5		ug/L		93	54 - 146	0	20
Vinyl chloride	1.0	U	50.0	55.9		ug/L		112	58 - 137	1	20
Xylenes, Total	0.50	U	100	102		ug/L		102	79 - 121	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*

Lab Sample ID: MB 680-547151/10
Matrix: Water
Analysis Batch: 547151

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 13:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 13:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/12/18 13:05	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 13:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/12/18 13:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/12/18 13:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/12/18 13:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/12/18 13:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/12/18 13:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/12/18 13:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 13:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/12/18 13:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/12/18 13:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/12/18 13:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/12/18 13:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/12/18 13:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/12/18 13:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/12/18 13:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 13:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/12/18 13:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/12/18 13:05	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/12/18 13:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 13:05	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/12/18 13:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/12/18 13:05	1
Acetone	10	U	10	10	7.0	ug/L		11/12/18 13:05	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/12/18 13:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 13:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/12/18 13:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1

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

Lab Sample ID: MB 680-547151/10
Matrix: Water
Analysis Batch: 547151

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/12/18 13:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 13:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/12/18 13:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 13:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/12/18 13:05	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 13:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/12/18 13:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/12/18 13:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/12/18 13:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 13:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/12/18 13:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/12/18 13:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/12/18 13:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/12/18 13:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 13:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/12/18 13:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/12/18 13:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/12/18 13:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/12/18 13:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/12/18 13:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/12/18 13:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/12/18 13:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/12/18 13:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/12/18 13:05	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/12/18 13:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/12/18 13:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/12/18 13:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/12/18 13:05	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/12/18 13:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/12/18 13:05	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/12/18 13:05	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 13:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/12/18 13:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*		*11/12/18 13:05*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/12/18 13:05*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*11/12/18 13:05*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/12/18 13:05*	*1*

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

Lab Sample ID: LCS 680-547151/4
Matrix: Water
Analysis Batch: 547151

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	49.9		ug/L		100	78 - 124
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.4		ug/L		107	71 - 121
1,1,2-Trichloroethane	50.0	48.6		ug/L		97	80 - 119
1,1-Dichloroethane	50.0	46.1		ug/L		92	77 - 125
1,1-Dichloroethene	50.0	50.1		ug/L		100	71 - 131
1,1-Dichloropropene	50.0	50.6		ug/L		101	79 - 125
1,2,3-Trichlorobenzene	50.0	46.0		ug/L		92	69 - 129
1,2,3-Trichloropropane	50.0	51.5		ug/L		103	73 - 122
1,2,4-Trichlorobenzene	50.0	46.7		ug/L		93	69 - 130
1,2,4-Trimethylbenzene	50.0	47.6		ug/L		95	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.2		ug/L		94	62 - 128
1,2-Dichlorobenzene	50.0	50.0		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	49.7		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	92.3		ug/L		92	79 - 121
1,2-Dichloropropane	50.0	46.4		ug/L		93	78 - 122
1,3,5-Trimethylbenzene	50.0	47.9		ug/L		96	75 - 124
1,3-Dichlorobenzene	50.0	51.9		ug/L		104	80 - 119
1,3-Dichloropropane	50.0	50.7		ug/L		101	80 - 119
1,4-Dichlorobenzene	50.0	50.3		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	53.6		ug/L		107	60 - 139
2-Butanone (MEK)	250	238		ug/L		95	56 - 143
2-Chlorotoluene	50.0	49.3		ug/L		99	79 - 122
2-Hexanone	250	236		ug/L		95	57 - 139
4-Chlorotoluene	50.0	48.6		ug/L		97	78 - 122
4-Isopropyltoluene	50.0	49.5		ug/L		99	77 - 127
4-Methyl-2-pentanone (MIBK)	250	238		ug/L		95	67 - 130
Acetone	250	238		ug/L		95	39 - 160
Benzene	50.0	47.7		ug/L		95	79 - 120
Bromobenzene	50.0	47.7		ug/L		95	80 - 120
Bromoform	50.0	39.7		ug/L		79	66 - 130
Bromomethane	50.0	60.3		ug/L		121	53 - 141
Carbon disulfide	50.0	48.1		ug/L		96	64 - 133
Carbon tetrachloride	50.0	47.3		ug/L		95	72 - 136
Chlorobenzene	50.0	48.0		ug/L		96	82 - 118
Chlorobromomethane	50.0	45.8		ug/L		92	78 - 123
Chlorodibromomethane	50.0	45.7		ug/L		91	74 - 126
Chloroethane	50.0	47.9		ug/L		96	60 - 138
Chloroform	50.0	49.6		ug/L		99	79 - 124
Chloromethane	50.0	48.1	M	ug/L		96	50 - 139
cis-1,2-Dichloroethene	50.0	45.8		ug/L		92	78 - 123
cis-1,3-Dichloropropene	50.0	47.5		ug/L		95	75 - 124
Dibromomethane	50.0	50.8		ug/L		102	79 - 123
Dichlorobromomethane	50.0	47.5		ug/L		95	79 - 125
Dichlorodifluoromethane	50.0	58.4		ug/L		117	32 - 152
Ethylbenzene	50.0	50.0		ug/L		100	79 - 121
Ethylene Dibromide	50.0	50.5		ug/L		101	75 - 127
Hexachlorobutadiene	50.0	46.0		ug/L		92	66 - 134

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

Lab Sample ID: LCS 680-547151/4
Matrix: Water
Analysis Batch: 547151

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	49.6		ug/L		99	72 - 131
Methyl tert-butyl ether	50.0	48.9		ug/L		98	71 - 124
Methylene Chloride	50.0	48.6		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	48.5		ug/L		97	80 - 121
Naphthalene	50.0	54.2		ug/L		108	61 - 128
n-Butylbenzene	50.0	52.3		ug/L		105	75 - 128
N-Propylbenzene	50.0	50.0		ug/L		100	76 - 126
o-Xylene	50.0	48.5		ug/L		97	78 - 122
sec-Butylbenzene	50.0	49.3		ug/L		99	77 - 126
Styrene	50.0	50.6		ug/L		101	78 - 123
tert-Butylbenzene	50.0	47.8		ug/L		96	78 - 124
Tetrachloroethene	50.0	49.4		ug/L		99	74 - 129
Toluene	50.0	47.0		ug/L		94	80 - 121
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124
trans-1,3-Dichloropropene	50.0	49.0		ug/L		98	73 - 127
Trichloroethene	50.0	47.2		ug/L		94	79 - 123
Trichlorofluoromethane	50.0	54.6		ug/L		109	65 - 141
Vinyl acetate	100	110		ug/L		110	54 - 146
Vinyl chloride	50.0	50.1		ug/L		100	58 - 137
Xylenes, Total	100	97.0		ug/L		97	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Lab Sample ID: LCSD 680-547151/5
Matrix: Water
Analysis Batch: 547151

Client Sample 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	54.4		ug/L		109	78 - 124	9	20
1,1,1-Trichloroethane	50.0	51.5		ug/L		103	74 - 131	5	20
1,1,2,2-Tetrachloroethane	50.0	55.6		ug/L		111	71 - 121	4	20
1,1,2-Trichloroethane	50.0	49.5		ug/L		99	80 - 119	2	20
1,1-Dichloroethane	50.0	50.1		ug/L		100	77 - 125	8	20
1,1-Dichloroethene	50.0	51.9		ug/L		104	71 - 131	4	20
1,1-Dichloropropene	50.0	53.3		ug/L		107	79 - 125	5	20
1,2,3-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 129	3	20
1,2,3-Trichloropropane	50.0	53.8		ug/L		108	73 - 122	4	20
1,2,4-Trichlorobenzene	50.0	47.8		ug/L		96	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	51.3		ug/L		103	76 - 124	7	20
1,2-Dibromo-3-Chloropropane	50.0	50.0		ug/L		100	62 - 128	6	20
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119	5	20
1,2-Dichloroethane	50.0	50.8		ug/L		102	73 - 128	2	20
1,2-Dichloroethene, Total	100	98.7		ug/L		99	79 - 121	7	20
1,2-Dichloropropane	50.0	48.4		ug/L		97	78 - 122	4	20

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

Lab Sample ID: LCSD 680-547151/5
Matrix: Water
Analysis Batch: 547151

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	51.9		ug/L		104	75 - 124	8	20
1,3-Dichlorobenzene	50.0	54.4		ug/L		109	80 - 119	5	20
1,3-Dichloropropane	50.0	51.9		ug/L		104	80 - 119	2	20
1,4-Dichlorobenzene	50.0	52.9		ug/L		106	79 - 118	5	20
2,2-Dichloropropane	50.0	55.9		ug/L		112	60 - 139	4	20
2-Butanone (MEK)	250	238		ug/L		95	56 - 143	0	20
2-Chlorotoluene	50.0	53.1		ug/L		106	79 - 122	7	20
2-Hexanone	250	241		ug/L		97	57 - 139	2	20
4-Chlorotoluene	50.0	51.9		ug/L		104	78 - 122	7	20
4-Isopropyltoluene	50.0	53.1		ug/L		106	77 - 127	7	20
4-Methyl-2-pentanone (MIBK)	250	244		ug/L		98	67 - 130	3	20
Acetone	250	245		ug/L		98	39 - 160	3	20
Benzene	50.0	49.8		ug/L		100	79 - 120	4	20
Bromobenzene	50.0	51.1		ug/L		102	80 - 120	7	20
Bromoform	50.0	41.9		ug/L		84	66 - 130	6	20
Bromomethane	50.0	63.6		ug/L		127	53 - 141	5	20
Carbon disulfide	50.0	51.4		ug/L		103	64 - 133	7	20
Carbon tetrachloride	50.0	50.6		ug/L		101	72 - 136	7	20
Chlorobenzene	50.0	51.1		ug/L		102	82 - 118	6	20
Chlorobromomethane	50.0	46.4		ug/L		93	78 - 123	1	20
Chlorodibromomethane	50.0	46.3		ug/L		93	74 - 126	1	20
Chloroethane	50.0	50.4		ug/L		101	60 - 138	5	20
Chloroform	50.0	50.8		ug/L		102	79 - 124	2	20
Chloromethane	50.0	51.0	M	ug/L		102	50 - 139	6	20
cis-1,2-Dichloroethene	50.0	48.8		ug/L		98	78 - 123	6	20
cis-1,3-Dichloropropene	50.0	48.6		ug/L		97	75 - 124	2	20
Dibromomethane	50.0	51.3		ug/L		103	79 - 123	1	20
Dichlorobromomethane	50.0	49.2		ug/L		98	79 - 125	3	20
Dichlorodifluoromethane	50.0	62.8		ug/L		126	32 - 152	7	20
Ethylbenzene	50.0	54.3		ug/L		109	79 - 121	8	20
Ethylene Dibromide	50.0	52.2		ug/L		104	75 - 127	3	20
Hexachlorobutadiene	50.0	48.4		ug/L		97	66 - 134	5	20
Isopropylbenzene	50.0	53.5		ug/L		107	72 - 131	8	20
Methyl tert-butyl ether	50.0	49.6		ug/L		99	71 - 124	1	20
Methylene Chloride	50.0	48.1		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene	50.0	52.5		ug/L		105	80 - 121	8	20
Naphthalene	50.0	55.6		ug/L		111	61 - 128	2	20
n-Butylbenzene	50.0	55.2		ug/L		110	75 - 128	6	20
N-Propylbenzene	50.0	54.0		ug/L		108	76 - 126	8	20
o-Xylene	50.0	51.8		ug/L		104	78 - 122	6	20
sec-Butylbenzene	50.0	52.8		ug/L		106	77 - 126	7	20
Styrene	50.0	53.3		ug/L		107	78 - 123	5	20
tert-Butylbenzene	50.0	51.5		ug/L		103	78 - 124	7	20
Tetrachloroethene	50.0	52.7		ug/L		105	74 - 129	6	20
Toluene	50.0	49.7		ug/L		99	80 - 121	6	20
trans-1,2-Dichloroethene	50.0	49.9		ug/L		100	75 - 124	7	20
trans-1,3-Dichloropropene	50.0	50.9		ug/L		102	73 - 127	4	20
Trichloroethene	50.0	50.5		ug/L		101	79 - 123	7	20

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

Lab Sample ID: LCSD 680-547151/5
Matrix: Water
Analysis Batch: 547151

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	57.1		ug/L		114	65 - 141	5	20
Vinyl acetate			100	112		ug/L		112	54 - 146	2	20
Vinyl chloride			50.0	53.6		ug/L		107	58 - 137	7	20
Xylenes, Total			100	104		ug/L		104	79 - 121	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: MB 680-547304/10
Matrix: Water
Analysis Batch: 547304

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 10:47	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 10:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/13/18 10:47	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 10:47	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/13/18 10:47	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/13/18 10:47	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/13/18 10:47	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/13/18 10:47	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/13/18 10:47	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/13/18 10:47	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 10:47	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/13/18 10:47	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/13/18 10:47	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/13/18 10:47	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/13/18 10:47	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/13/18 10:47	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/13/18 10:47	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/13/18 10:47	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 10:47	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/13/18 10:47	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/13/18 10:47	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/13/18 10:47	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 10:47	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 10:47	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/13/18 10:47	1
Acetone	10	U	10	10	7.0	ug/L		11/13/18 10:47	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/13/18 10:47	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 10:47	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/13/18 10:47	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1

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

Lab Sample ID: MB 680-547304/10
Matrix: Water
Analysis Batch: 547304

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/13/18 10:47	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 10:47	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/13/18 10:47	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 10:47	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/13/18 10:47	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 10:47	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/13/18 10:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/13/18 10:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/13/18 10:47	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 10:47	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/13/18 10:47	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/13/18 10:47	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/13/18 10:47	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/13/18 10:47	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 10:47	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/13/18 10:47	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/13/18 10:47	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/13/18 10:47	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/13/18 10:47	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/13/18 10:47	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/13/18 10:47	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 10:47	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/13/18 10:47	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/13/18 10:47	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/13/18 10:47	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 10:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/13/18 10:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 10:47	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/13/18 10:47	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/13/18 10:47	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/13/18 10:47	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/13/18 10:47	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/13/18 10:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*11/13/18 10:47*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/13/18 10:47*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/13/18 10:47*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/13/18 10:47*	*1*

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

Lab Sample ID: LCS 680-547304/4
Matrix: Water
Analysis Batch: 547304

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	51.3		ug/L		103	78 - 124
1,1,1-Trichloroethane	50.0	49.6		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	50.0	54.9		ug/L		110	71 - 121
1,1,2-Trichloroethane	50.0	49.3		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	45.9		ug/L		92	77 - 125
1,1-Dichloroethene	50.0	51.6		ug/L		103	71 - 131
1,1-Dichloropropene	50.0	51.6		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 129
1,2,3-Trichloropropane	50.0	52.9		ug/L		106	73 - 122
1,2,4-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 130
1,2,4-Trimethylbenzene	50.0	49.1		ug/L		98	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	47.7		ug/L		95	62 - 128
1,2-Dichlorobenzene	50.0	50.2		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	49.1		ug/L		98	73 - 128
1,2-Dichloroethene, Total	100	92.2		ug/L		92	79 - 121
1,2-Dichloropropane	50.0	47.4		ug/L		95	78 - 122
1,3,5-Trimethylbenzene	50.0	49.3		ug/L		99	75 - 124
1,3-Dichlorobenzene	50.0	52.5		ug/L		105	80 - 119
1,3-Dichloropropane	50.0	51.3		ug/L		103	80 - 119
1,4-Dichlorobenzene	50.0	51.0		ug/L		102	79 - 118
2,2-Dichloropropane	50.0	55.0		ug/L		110	60 - 139
2-Butanone (MEK)	250	248		ug/L		99	56 - 143
2-Chlorotoluene	50.0	50.8		ug/L		102	79 - 122
2-Hexanone	250	245		ug/L		98	57 - 139
4-Chlorotoluene	50.0	50.2		ug/L		100	78 - 122
4-Isopropyltoluene	50.0	51.5		ug/L		103	77 - 127
4-Methyl-2-pentanone (MIBK)	250	245		ug/L		98	67 - 130
Acetone	250	253		ug/L		101	39 - 160
Benzene	50.0	48.3		ug/L		97	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	40.7		ug/L		81	66 - 130
Bromomethane	50.0	56.7		ug/L		113	53 - 141
Carbon disulfide	50.0	49.5		ug/L		99	64 - 133
Carbon tetrachloride	50.0	47.8		ug/L		96	72 - 136
Chlorobenzene	50.0	48.9		ug/L		98	82 - 118
Chlorobromomethane	50.0	44.9		ug/L		90	78 - 123
Chlorodibromomethane	50.0	45.6		ug/L		91	74 - 126
Chloroethane	50.0	47.6		ug/L		95	60 - 138
Chloroform	50.0	49.3		ug/L		99	79 - 124
Chloromethane	50.0	48.2	M	ug/L		96	50 - 139
cis-1,2-Dichloroethene	50.0	46.6		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	47.5		ug/L		95	75 - 124
Dibromomethane	50.0	51.2		ug/L		102	79 - 123
Dichlorobromomethane	50.0	48.1		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	58.1		ug/L		116	32 - 152
Ethylbenzene	50.0	52.1		ug/L		104	79 - 121
Ethylene Dibromide	50.0	51.2		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	46.6		ug/L		93	66 - 134

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

Lab Sample ID: LCS 680-547304/4
Matrix: Water
Analysis Batch: 547304

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	51.2		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	49.3		ug/L		99	71 - 124
Methylene Chloride	50.0	49.3		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	50.7		ug/L		101	80 - 121
Naphthalene	50.0	56.0		ug/L		112	61 - 128
n-Butylbenzene	50.0	54.0		ug/L		108	75 - 128
N-Propylbenzene	50.0	52.1		ug/L		104	76 - 126
o-Xylene	50.0	49.9		ug/L		100	78 - 122
sec-Butylbenzene	50.0	50.6		ug/L		101	77 - 126
Styrene	50.0	51.2		ug/L		102	78 - 123
tert-Butylbenzene	50.0	48.6		ug/L		97	78 - 124
Tetrachloroethene	50.0	51.4		ug/L		103	74 - 129
Toluene	50.0	47.8		ug/L		96	80 - 121
trans-1,2-Dichloroethene	50.0	45.6		ug/L		91	75 - 124
trans-1,3-Dichloropropene	50.0	49.7		ug/L		99	73 - 127
Trichloroethene	50.0	47.5		ug/L		95	79 - 123
Trichlorofluoromethane	50.0	55.6		ug/L		111	65 - 141
Vinyl acetate	100	111		ug/L		111	54 - 146
Vinyl chloride	50.0	49.9		ug/L		100	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

Lab Sample ID: LCSD 680-547304/5
Matrix: Water
Analysis Batch: 547304

Client Sample 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	52.9		ug/L		106	78 - 124	3	20
1,1,1-Trichloroethane	50.0	50.7		ug/L		101	74 - 131	2	20
1,1,2,2-Tetrachloroethane	50.0	55.9		ug/L		112	71 - 121	2	20
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	80 - 119	3	20
1,1-Dichloroethane	50.0	46.5		ug/L		93	77 - 125	1	20
1,1-Dichloroethene	50.0	52.2		ug/L		104	71 - 131	1	20
1,1-Dichloropropene	50.0	52.4		ug/L		105	79 - 125	2	20
1,2,3-Trichlorobenzene	50.0	47.6		ug/L		95	69 - 129	0	20
1,2,3-Trichloropropane	50.0	54.2		ug/L		108	73 - 122	2	20
1,2,4-Trichlorobenzene	50.0	47.9		ug/L		96	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	50.4		ug/L		101	76 - 124	2	20
1,2-Dibromo-3-Chloropropane	50.0	48.6		ug/L		97	62 - 128	2	20
1,2-Dichlorobenzene	50.0	51.4		ug/L		103	80 - 119	2	20
1,2-Dichloroethane	50.0	49.5		ug/L		99	73 - 128	1	20
1,2-Dichloroethene, Total	100	95.2		ug/L		95	79 - 121	3	20
1,2-Dichloropropane	50.0	46.8		ug/L		94	78 - 122	1	20

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

Lab Sample ID: LCSD 680-547304/5
Matrix: Water
Analysis Batch: 547304

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	50.9		ug/L		102	75 - 124	3	20
1,3-Dichlorobenzene	50.0	54.6		ug/L		109	80 - 119	4	20
1,3-Dichloropropane	50.0	51.5		ug/L		103	80 - 119	0	20
1,4-Dichlorobenzene	50.0	52.0		ug/L		104	79 - 118	2	20
2,2-Dichloropropane	50.0	55.7		ug/L		111	60 - 139	1	20
2-Butanone (MEK)	250	251		ug/L		100	56 - 143	1	20
2-Chlorotoluene	50.0	52.2		ug/L		104	79 - 122	3	20
2-Hexanone	250	246		ug/L		98	57 - 139	0	20
4-Chlorotoluene	50.0	51.3		ug/L		103	78 - 122	2	20
4-Isopropyltoluene	50.0	52.1		ug/L		104	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	248		ug/L		99	67 - 130	1	20
Acetone	250	247		ug/L		99	39 - 160	2	20
Benzene	50.0	49.4		ug/L		99	79 - 120	2	20
Bromobenzene	50.0	50.9		ug/L		102	80 - 120	1	20
Bromoform	50.0	41.7		ug/L		83	66 - 130	2	20
Bromomethane	50.0	58.7		ug/L		117	53 - 141	3	20
Carbon disulfide	50.0	49.7		ug/L		99	64 - 133	0	20
Carbon tetrachloride	50.0	48.3		ug/L		97	72 - 136	1	20
Chlorobenzene	50.0	50.3		ug/L		101	82 - 118	3	20
Chlorobromomethane	50.0	45.5		ug/L		91	78 - 123	1	20
Chlorodibromomethane	50.0	46.2		ug/L		92	74 - 126	1	20
Chloroethane	50.0	51.7		ug/L		103	60 - 138	8	20
Chloroform	50.0	50.4		ug/L		101	79 - 124	2	20
Chloromethane	50.0	49.2	M	ug/L		98	50 - 139	2	20
cis-1,2-Dichloroethene	50.0	47.9		ug/L		96	78 - 123	3	20
cis-1,3-Dichloropropene	50.0	48.4		ug/L		97	75 - 124	2	20
Dibromomethane	50.0	51.7		ug/L		103	79 - 123	1	20
Dichlorobromomethane	50.0	48.7		ug/L		97	79 - 125	1	20
Dichlorodifluoromethane	50.0	59.0		ug/L		118	32 - 152	1	20
Ethylbenzene	50.0	53.4		ug/L		107	79 - 121	2	20
Ethylene Dibromide	50.0	51.4		ug/L		103	75 - 127	1	20
Hexachlorobutadiene	50.0	48.4		ug/L		97	66 - 134	4	20
Isopropylbenzene	50.0	52.5		ug/L		105	72 - 131	3	20
Methyl tert-butyl ether	50.0	47.3		ug/L		95	71 - 124	4	20
Methylene Chloride	50.0	48.7		ug/L		97	74 - 124	1	20
m-Xylene & p-Xylene	50.0	51.5		ug/L		103	80 - 121	2	20
Naphthalene	50.0	56.2		ug/L		112	61 - 128	0	20
n-Butylbenzene	50.0	54.3		ug/L		109	75 - 128	1	20
N-Propylbenzene	50.0	53.5		ug/L		107	76 - 126	3	20
o-Xylene	50.0	51.1		ug/L		102	78 - 122	2	20
sec-Butylbenzene	50.0	52.4		ug/L		105	77 - 126	3	20
Styrene	50.0	53.1		ug/L		106	78 - 123	4	20
tert-Butylbenzene	50.0	50.4		ug/L		101	78 - 124	4	20
Tetrachloroethene	50.0	52.3		ug/L		105	74 - 129	2	20
Toluene	50.0	48.4		ug/L		97	80 - 121	1	20
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124	4	20
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	73 - 127	2	20
Trichloroethene	50.0	48.2		ug/L		96	79 - 123	1	20

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

Lab Sample ID: LCSD 680-547304/5
Matrix: Water
Analysis Batch: 547304

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	57.0		ug/L		114	65 - 141	3	20
Vinyl acetate			100	112		ug/L		112	54 - 146	1	20
Vinyl chloride			50.0	50.7		ug/L		101	58 - 137	2	20
Xylenes, Total			100	103		ug/L		103	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-547139/11
Matrix: Water
Analysis Batch: 547139

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 11:26	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 11:26	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		11/12/18 11:26	1
Methane (TCD)	77	U	390	77	39	ug/L		11/12/18 11:26	1

Lab Sample ID: LCS 680-547139/6
Matrix: Water
Analysis Batch: 547139

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		90	75 - 125
Ethylene			269	239		ug/L		89	75 - 125
Methane			154	133		ug/L		87	75 - 125

Lab Sample ID: LCS 680-547139/9
Matrix: Water
Analysis Batch: 547139

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	75 - 125

Lab Sample ID: LCSD 680-547139/10
Matrix: Water
Analysis Batch: 547139

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)			1920	1840		ug/L		96	75 - 125	2	30

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

Lab Sample ID: LCSD 680-547139/7
Matrix: Water
Analysis Batch: 547139

Client Sample 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	268		ug/L		93	75 - 125	4	30
Ethylene	269	250		ug/L		93	75 - 125	5	30
Methane	154	141		ug/L		91	75 - 125	5	30

Lab Sample ID: MB 680-547315/43
Matrix: Water
Analysis Batch: 547315

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/12/18 18:44	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/12/18 18:44	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		11/12/18 18:44	1
Methane (TCD)	77	U	390	77	39	ug/L		11/12/18 18:44	1

Lab Sample ID: LCS 680-547315/38
Matrix: Water
Analysis Batch: 547315

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	253		ug/L		88	75 - 125
Ethylene	269	240		ug/L		89	75 - 125
Methane	154	139		ug/L		90	75 - 125

Lab Sample ID: LCS 680-547315/40
Matrix: Water
Analysis Batch: 547315

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	75 - 125

Lab Sample ID: LCSD 680-547315/39
Matrix: Water
Analysis Batch: 547315

Client Sample 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	75 - 125	3	30
Ethylene	269	242		ug/L		90	75 - 125	1	30
Methane	154	135		ug/L		88	75 - 125	2	30

Lab Sample ID: LCSD 680-547315/41
Matrix: Water
Analysis Batch: 547315

Client Sample 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	1800		ug/L		94	75 - 125	1	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-547541/53
Matrix: Water
Analysis Batch: 547541

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		11/14/18 17:28	1

Lab Sample ID: LCS 680-547541/54
Matrix: Water
Analysis Batch: 547541

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	10.4		mg/L		104	87 - 112

Lab Sample ID: LCSD 680-547541/55
Matrix: Water
Analysis Batch: 547541

Client Sample 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	0	15

Lab Sample ID: 680-160018-8 MS
Matrix: Water
Analysis Batch: 547541

Client Sample ID: G6M-13-01X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	14		10.0	24.0		mg/L		104	87 - 112

Lab Sample ID: 680-160018-8 MSD
Matrix: Water
Analysis Batch: 547541

Client Sample ID: G6M-13-01X_Fal18
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	24.2		mg/L		105	87 - 112	1	15

Lab Sample ID: MB 680-547542/82
Matrix: Water
Analysis Batch: 547542

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		11/14/18 23:42	1

Lab Sample ID: LCS 680-547542/83
Matrix: Water
Analysis Batch: 547542

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	10.1		mg/L		101	87 - 112

Lab Sample ID: LCSD 680-547542/84
Matrix: Water
Analysis Batch: 547542

Client Sample 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	10.1		mg/L		101	87 - 112	0	15

Lab Sample ID: 680-160018-15 DU
Matrix: Water
Analysis Batch: 547542

Client Sample ID: AOC50-DUP02-Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	9.0	D M	8.95	D M	mg/L		0.8	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-546175/1-A
Matrix: Water
Analysis Batch: 546954

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546175

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/08/18 00:32	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/08/18 00:32	1

Lab Sample ID: LCS 680-546175/2-A
Matrix: Water
Analysis Batch: 546954

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546175

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	4980		ug/L		100	87 - 115
Manganese	500	514		ug/L		103	90 - 114

Lab Sample ID: MB 680-546444/1-A
Matrix: Water
Analysis Batch: 547169

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546444

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		11/10/18 18:04	1
Manganese	3.0	U	10	3.0	1.0	ug/L		11/10/18 18:04	1

Lab Sample ID: LCS 680-546444/2-A
Matrix: Water
Analysis Batch: 547169

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546444

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	2500	2660		ug/L		106	87 - 115
Manganese	250	278		ug/L		111	90 - 114

Lab Sample ID: 680-160018-18 MS
Matrix: Water
Analysis Batch: 547169

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Dissolved
Prep Batch: 546444

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	270		1000	1270		ug/L		100	87 - 115
Manganese	7300	J1	100	7360	4	ug/L		100	90 - 114

Lab Sample ID: 680-160018-18 MSD
Matrix: Water
Analysis Batch: 547169

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Dissolved
Prep Batch: 546444

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	270		1000	1280		ug/L		101	87 - 115	1	20
Manganese	7300	J1	100	7130	4	ug/L		-130	90 - 114	3	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-546176/1-A
Matrix: Water
Analysis Batch: 546426

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546176

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/06/18 04:44	1

Lab Sample ID: LCS 680-546176/2-A
Matrix: Water
Analysis Batch: 546426

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546176

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	105		ug/L		105	84 - 116

Lab Sample ID: MB 680-546443/1-A
Matrix: Water
Analysis Batch: 546780

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546443

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		11/07/18 20:58	1

Lab Sample ID: LCS 680-546443/2-A
Matrix: Water
Analysis Batch: 546780

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546443

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	52.0		ug/L		104	84 - 116

Lab Sample ID: 680-160018-18 MS
Matrix: Water
Analysis Batch: 546780

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Dissolved
Prep Batch: 546443

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	8.6		200	201		ug/L		96	84 - 116

Lab Sample ID: 680-160018-18 MSD
Matrix: Water
Analysis Batch: 546780

Client Sample ID: G6M-03-08X_Fal18
Prep Type: Dissolved
Prep Batch: 546443

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	8.6		200	203		ug/L		97	84 - 116	1	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-436412/60
Matrix: Water
Analysis Batch: 436412

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		11/05/18 18:42	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 280-436412/59
Matrix: Water
Analysis Batch: 436412

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	5.25		mg/L		105	90 - 110

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-546191/1
Matrix: Water
Analysis Batch: 546191

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		11/05/18 03:47	1

Lab Sample ID: LCS 680-546191/2
Matrix: Water
Analysis Batch: 546191

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	9.33		mg/L		93	75 - 125

Lab Sample ID: LCSD 680-546191/3
Matrix: Water
Analysis Batch: 546191

Client Sample 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	9.21		mg/L		92	75 - 125	1	30

Lab Sample ID: 680-160018-3 DU
Matrix: Water
Analysis Batch: 546191

Client Sample ID: G6M-03-07X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfide	1.0	U	1.0	U	mg/L		NC	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-436636/35
Matrix: Water
Analysis Batch: 436636

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.275	J	1.0	0.50	0.16	mg/L		11/06/18 20:24	1

Lab Sample ID: LCS 280-436636/34
Matrix: Water
Analysis Batch: 436636

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	23.0		mg/L		92	88 - 112

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 680-160018-3 MS
Matrix: Water
Analysis Batch: 436636

Client Sample ID: G6M-03-07X_Fal18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	18		25.0	41.0		mg/L		94	88 - 112

Lab Sample ID: 680-160018-3 MSD
Matrix: Water
Analysis Batch: 436636

Client Sample ID: G6M-03-07X_Fal18
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	18		25.0	41.0		mg/L		94	88 - 112	0	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-437011/5
Matrix: Water
Analysis Batch: 437011

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		11/08/18 19:04	1

Lab Sample ID: LCS 280-437011/4
Matrix: Water
Analysis Batch: 437011

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	202		mg/L		101	90 - 110

Lab Sample ID: MB 280-437230/31
Matrix: Water
Analysis Batch: 437230

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		11/09/18 21:29	1

Lab Sample ID: LCS 280-437230/30
Matrix: Water
Analysis Batch: 437230

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	90 - 110

GC/MS VOA

Analysis Batch: 547061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-1	G6M-02-01X_Fal18	Total/NA	Water	8260B	
680-160018-2	MW-3_Fal18	Total/NA	Water	8260B	
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	8260B	
680-160018-4	XSA-12-97X_Fal18	Total/NA	Water	8260B	
680-160018-5	G6M-04-01X_Fal18	Total/NA	Water	8260B	
680-160018-6	G6M-04-03X_Fal18	Total/NA	Water	8260B	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	8260B	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	8260B	
680-160018-9	MW-7_Fal18	Total/NA	Water	8260B	
680-160018-11	G6M-EB04_Fal18	Total/NA	Water	8260B	
680-160018-12	G6M-TB06_Fal18	Total/NA	Water	8260B	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	8260B	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	8260B	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	8260B	
680-160018-16	G6M-13-03X_Fal18	Total/NA	Water	8260B	
680-160018-17	XSA-12-96X_Fal18	Total/NA	Water	8260B	
680-160018-18	G6M-03-08X_Fal18	Total/NA	Water	8260B	
MB 680-547061/10	Method Blank	Total/NA	Water	8260B	
LCS 680-547061/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-547061/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-160018-18 MS	G6M-03-08X_Fal18	Total/NA	Water	8260B	
680-160018-18 MSD	G6M-03-08X_Fal18	Total/NA	Water	8260B	

Analysis Batch: 547151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	8260B	
MB 680-547151/10	Method Blank	Total/NA	Water	8260B	
LCS 680-547151/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-547151/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 547304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-19	G6M-EB05_Fal18	Total/NA	Water	8260B	
MB 680-547304/10	Method Blank	Total/NA	Water	8260B	
LCS 680-547304/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-547304/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 547139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	RSK-175	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	RSK-175	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	RSK-175	
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	RSK-175	
MB 680-547139/11	Method Blank	Total/NA	Water	RSK-175	
LCS 680-547139/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-547139/9	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-547139/10	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-547139/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

GC VOA (Continued)

Analysis Batch: 547315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	RSK-175	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	RSK-175	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	RSK-175	
MB 680-547315/43	Method Blank	Total/NA	Water	RSK-175	
LCS 680-547315/38	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-547315/40	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-547315/39	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-547315/41	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 547541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	9056A	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	9056A	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	9056A	
MB 680-547541/53	Method Blank	Total/NA	Water	9056A	
LCS 680-547541/54	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-547541/55	Lab Control Sample Dup	Total/NA	Water	9056A	
680-160018-8 MS	G6M-13-01X_Fal18	Total/NA	Water	9056A	
680-160018-8 MSD	G6M-13-01X_Fal18	Total/NA	Water	9056A	

Analysis Batch: 547542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	9056A	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	9056A	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	9056A	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	9056A	
MB 680-547542/82	Method Blank	Total/NA	Water	9056A	
LCS 680-547542/83	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-547542/84	Lab Control Sample Dup	Total/NA	Water	9056A	
680-160018-15 DU	AOC50-DUP02-Fal18	Total/NA	Water	9056A	

Metals

Prep Batch: 546175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-1	G6M-02-01X_Fal18	Dissolved	Water	3005A	
680-160018-2	MW-3_Fal18	Dissolved	Water	3005A	
680-160018-3	G6M-03-07X_Fal18	Dissolved	Water	3005A	
680-160018-4	XSA-12-97X_Fal18	Dissolved	Water	3005A	
680-160018-5	G6M-04-01X_Fal18	Dissolved	Water	3005A	
680-160018-6	G6M-04-03X_Fal18	Dissolved	Water	3005A	
680-160018-7	G6M-13-04X_Fal18	Dissolved	Water	3005A	
680-160018-8	G6M-13-01X_Fal18	Dissolved	Water	3005A	
680-160018-9	MW-7_Fal18	Dissolved	Water	3005A	
680-160018-10	AOC50-DUP05-Fal18	Dissolved	Water	3005A	
680-160018-11	G6M-EB04_Fal18	Dissolved	Water	3005A	
680-160018-13	G6M-97-05B_Fal18	Dissolved	Water	3005A	
680-160018-15	AOC50-DUP02-Fal18	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 546175 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-17	XSA-12-96X_Fal18	Dissolved	Water	3005A	
680-160018-19	G6M-EB05_Fal18	Dissolved	Water	3005A	
MB 680-546175/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-546175/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 546176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-1	G6M-02-01X_Fal18	Dissolved	Water	3005A	
680-160018-2	MW-3_Fal18	Dissolved	Water	3005A	
680-160018-3	G6M-03-07X_Fal18	Dissolved	Water	3005A	
680-160018-4	XSA-12-97X_Fal18	Dissolved	Water	3005A	
680-160018-5	G6M-04-01X_Fal18	Dissolved	Water	3005A	
680-160018-6	G6M-04-03X_Fal18	Dissolved	Water	3005A	
680-160018-7	G6M-13-04X_Fal18	Dissolved	Water	3005A	
680-160018-8	G6M-13-01X_Fal18	Dissolved	Water	3005A	
680-160018-9	MW-7_Fal18	Dissolved	Water	3005A	
680-160018-10	AOC50-DUP05-Fal18	Dissolved	Water	3005A	
680-160018-11	G6M-EB04_Fal18	Dissolved	Water	3005A	
680-160018-13	G6M-97-05B_Fal18	Dissolved	Water	3005A	
680-160018-15	AOC50-DUP02-Fal18	Dissolved	Water	3005A	
680-160018-17	XSA-12-96X_Fal18	Dissolved	Water	3005A	
680-160018-19	G6M-EB05_Fal18	Dissolved	Water	3005A	
MB 680-546176/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-546176/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 546426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-1	G6M-02-01X_Fal18	Dissolved	Water	6020A	546176
680-160018-2	MW-3_Fal18	Dissolved	Water	6020A	546176
680-160018-3	G6M-03-07X_Fal18	Dissolved	Water	6020A	546176
680-160018-4	XSA-12-97X_Fal18	Dissolved	Water	6020A	546176
680-160018-5	G6M-04-01X_Fal18	Dissolved	Water	6020A	546176
680-160018-6	G6M-04-03X_Fal18	Dissolved	Water	6020A	546176
680-160018-7	G6M-13-04X_Fal18	Dissolved	Water	6020A	546176
680-160018-8	G6M-13-01X_Fal18	Dissolved	Water	6020A	546176
680-160018-9	MW-7_Fal18	Dissolved	Water	6020A	546176
680-160018-10	AOC50-DUP05-Fal18	Dissolved	Water	6020A	546176
680-160018-11	G6M-EB04_Fal18	Dissolved	Water	6020A	546176
680-160018-13	G6M-97-05B_Fal18	Dissolved	Water	6020A	546176
680-160018-15	AOC50-DUP02-Fal18	Dissolved	Water	6020A	546176
680-160018-17	XSA-12-96X_Fal18	Dissolved	Water	6020A	546176
680-160018-19	G6M-EB05_Fal18	Dissolved	Water	6020A	546176
MB 680-546176/1-A	Method Blank	Total Recoverable	Water	6020A	546176
LCS 680-546176/2-A	Lab Control Sample	Total Recoverable	Water	6020A	546176

Prep Batch: 546443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-14	G6M-04-02X_Fal18	Dissolved	Water	3005A	
680-160018-18	G6M-03-08X_Fal18	Dissolved	Water	3005A	
MB 680-546443/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-546443/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 546443 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-18 MS	G6M-03-08X_Fal18	Dissolved	Water	3005A	
680-160018-18 MSD	G6M-03-08X_Fal18	Dissolved	Water	3005A	

Prep Batch: 546444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-14	G6M-04-02X_Fal18	Dissolved	Water	3005A	
680-160018-18	G6M-03-08X_Fal18	Dissolved	Water	3005A	
MB 680-546444/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-546444/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-160018-18 MS	G6M-03-08X_Fal18	Dissolved	Water	3005A	
680-160018-18 MSD	G6M-03-08X_Fal18	Dissolved	Water	3005A	

Analysis Batch: 546780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-14	G6M-04-02X_Fal18	Dissolved	Water	6020A	546443
680-160018-18	G6M-03-08X_Fal18	Dissolved	Water	6020A	546443
MB 680-546443/1-A	Method Blank	Total Recoverable	Water	6020A	546443
LCS 680-546443/2-A	Lab Control Sample	Total Recoverable	Water	6020A	546443
680-160018-18 MS	G6M-03-08X_Fal18	Dissolved	Water	6020A	546443
680-160018-18 MSD	G6M-03-08X_Fal18	Dissolved	Water	6020A	546443

Analysis Batch: 546954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-1	G6M-02-01X_Fal18	Dissolved	Water	6010C	546175
680-160018-2	MW-3_Fal18	Dissolved	Water	6010C	546175
680-160018-3	G6M-03-07X_Fal18	Dissolved	Water	6010C	546175
680-160018-4	XSA-12-97X_Fal18	Dissolved	Water	6010C	546175
680-160018-5	G6M-04-01X_Fal18	Dissolved	Water	6010C	546175
680-160018-6	G6M-04-03X_Fal18	Dissolved	Water	6010C	546175
680-160018-7	G6M-13-04X_Fal18	Dissolved	Water	6010C	546175
680-160018-8	G6M-13-01X_Fal18	Dissolved	Water	6010C	546175
680-160018-9	MW-7_Fal18	Dissolved	Water	6010C	546175
680-160018-10	AOC50-DUP05-Fal18	Dissolved	Water	6010C	546175
680-160018-11	G6M-EB04_Fal18	Dissolved	Water	6010C	546175
680-160018-13	G6M-97-05B_Fal18	Dissolved	Water	6010C	546175
680-160018-15	AOC50-DUP02-Fal18	Dissolved	Water	6010C	546175
680-160018-17	XSA-12-96X_Fal18	Dissolved	Water	6010C	546175
680-160018-19	G6M-EB05_Fal18	Dissolved	Water	6010C	546175
MB 680-546175/1-A	Method Blank	Total Recoverable	Water	6010C	546175
LCS 680-546175/2-A	Lab Control Sample	Total Recoverable	Water	6010C	546175

Analysis Batch: 547169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-14	G6M-04-02X_Fal18	Dissolved	Water	6010C	546444
680-160018-18	G6M-03-08X_Fal18	Dissolved	Water	6010C	546444
MB 680-546444/1-A	Method Blank	Total Recoverable	Water	6010C	546444
LCS 680-546444/2-A	Lab Control Sample	Total Recoverable	Water	6010C	546444
680-160018-18 MS	G6M-03-08X_Fal18	Dissolved	Water	6010C	546444
680-160018-18 MSD	G6M-03-08X_Fal18	Dissolved	Water	6010C	546444

General Chemistry

Analysis Batch: 436412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	353.2	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	353.2	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	353.2	
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	353.2	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	353.2	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	353.2	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	353.2	
MB 280-436412/60	Method Blank	Total/NA	Water	353.2	
LCS 280-436412/59	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 436636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	9060A	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	9060A	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	9060A	
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	9060A	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	9060A	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	9060A	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	9060A	
MB 280-436636/35	Method Blank	Total/NA	Water	9060A	
LCS 280-436636/34	Lab Control Sample	Total/NA	Water	9060A	
680-160018-3 MS	G6M-03-07X_Fal18	Total/NA	Water	9060A	
680-160018-3 MSD	G6M-03-07X_Fal18	Total/NA	Water	9060A	

Analysis Batch: 437011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	SM 2320B	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	SM 2320B	
MB 280-437011/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-437011/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 437230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	SM 2320B	
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	SM 2320B	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	SM 2320B	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	SM 2320B	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	SM 2320B	
MB 280-437230/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-437230/30	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 546191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-160018-3	G6M-03-07X_Fal18	Total/NA	Water	9034	
680-160018-7	G6M-13-04X_Fal18	Total/NA	Water	9034	
680-160018-8	G6M-13-01X_Fal18	Total/NA	Water	9034	
680-160018-10	AOC50-DUP05-Fal18	Total/NA	Water	9034	
680-160018-13	G6M-97-05B_Fal18	Total/NA	Water	9034	
680-160018-14	G6M-04-02X_Fal18	Total/NA	Water	9034	
680-160018-15	AOC50-DUP02-Fal18	Total/NA	Water	9034	
MB 680-546191/1	Method Blank	Total/NA	Water	9034	

General Chemistry (Continued)

Analysis Batch: 546191 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-546191/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-546191/3	Lab Control Sample Dup	Total/NA	Water	9034	
680-160018-3 DU	G6M-03-07X_Fal18	Total/NA	Water	9034	

Client Sample ID: G6M-02-01X_Fal18

Lab Sample ID: 680-160018-1

Date Collected: 10/29/18 09:15

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 14:14	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:25	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:42	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: MW-3_Fal18

Lab Sample ID: 680-160018-2

Date Collected: 10/29/18 11:05

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 14:37	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 02:23	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:27	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-03-07X_Fal18

Lab Sample ID: 680-160018-3

Date Collected: 10/29/18 12:55

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 15:00	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547139	11/12/18 14:38	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		5	5 mL	5 mL	547541	11/14/18 22:25	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 02:28	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:31	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:38	SVC	TAL DEN
	Instrument ID: WC_Alp 2									

Client Sample ID: G6M-03-07X_Fal18

Lab Sample ID: 680-160018-3

Date Collected: 10/29/18 12:55

Matrix: Water

Date Received: 11/01/18 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	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 01:17	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437011	11/08/18 19:37	SGB	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: XSA-12-97X_Fal18

Lab Sample ID: 680-160018-4

Date Collected: 10/29/18 09:00

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 15:23	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:44	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:57	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-01X_Fal18

Lab Sample ID: 680-160018-5

Date Collected: 10/29/18 11:35

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 15:46	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:49	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:01	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-03X_Fal18

Lab Sample ID: 680-160018-6

Date Collected: 10/29/18 12:40

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 16:10	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-04-03X_Fal18

Lab Sample ID: 680-160018-6

Date Collected: 10/29/18 12:40

Matrix: Water

Date Received: 11/01/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6010C		1			546954	11/08/18 01:30	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:45	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-13-04X_Fal18

Lab Sample ID: 680-160018-7

Date Collected: 10/29/18 09:55

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 16:33	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547139	11/12/18 14:51	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	547541	11/14/18 22:38	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:35	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:49	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:40	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 02:01	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437011	11/08/18 19:43	SGB	TAL DEN
	Instrument ID: WC-AT3									

Client Sample ID: G6M-13-01X_Fal18

Lab Sample ID: 680-160018-8

Date Collected: 10/29/18 12:20

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 16:56	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547139	11/12/18 15:04	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	547541	11/14/18 22:51	UI	TAL SAV
	Instrument ID: CICK									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-13-01X_Fal18

Lab Sample ID: 680-160018-8

Date Collected: 10/29/18 12:20
Matrix: Water
Date Received: 11/01/18 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	50 mL	546175	11/04/18 11:12	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:15	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:34	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:42	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		2			436636	11/07/18 02:24	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437230	11/10/18 00:00	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: MW-7_Fal18

Lab Sample ID: 680-160018-9

Date Collected: 10/29/18 14:55
Matrix: Water
Date Received: 11/01/18 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	547061	11/10/18 17:19	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:40	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:53	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: AOC50-DUP05-Fal18

Lab Sample ID: 680-160018-10

Date Collected: 10/29/18 12:30
Matrix: Water
Date Received: 11/01/18 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	547151	11/12/18 20:02	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547139	11/12/18 15:17	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	547542	11/15/18 00:21	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 02:33	BCB	TAL SAV
	Instrument ID: ICPE									

Client Sample ID: AOC50-DUP05-Fal18

Lab Sample ID: 680-160018-10

Date Collected: 10/29/18 12:30

Matrix: Water

Date Received: 11/01/18 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	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:35	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:44	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 02:39	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437230	11/09/18 23:32	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-EB04_Fal18

Lab Sample ID: 680-160018-11

Date Collected: 10/29/18 15:30

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 13:28	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 02:13	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:20	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-TB06_Fal18

Lab Sample ID: 680-160018-12

Date Collected: 10/29/18 00:00

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 13:51	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-97-05B_Fal18

Lab Sample ID: 680-160018-13

Date Collected: 10/30/18 08:40

Matrix: Water

Date Received: 11/01/18 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		2	5 mL	5 mL	547061	11/10/18 19:38	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547315	11/12/18 18:57	KAB	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: G6M-97-05B_Fal18

Lab Sample ID: 680-160018-13

Date Collected: 10/30/18 08:40

Matrix: Water

Date Received: 11/01/18 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	9056A		1	5 mL	5 mL	547542	11/15/18 00:34	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:20	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 05:38	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:46	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 02:56	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437230	11/09/18 23:54	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-02X_Fal18

Lab Sample ID: 680-160018-14

Date Collected: 10/30/18 12:45

Matrix: Water

Date Received: 11/01/18 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		2	5 mL	5 mL	547061	11/10/18 19:15	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547315	11/12/18 19:10	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	547542	11/15/18 00:47	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546444	11/06/18 12:56	AJR	TAL SAV
Dissolved	Analysis	6010C		1			547169	11/10/18 01:28	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546443	11/06/18 12:56	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546780	11/07/18 21:24	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:48	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 03:12	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437230	11/09/18 23:46	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: AOC50-DUP02-Fal18

Lab Sample ID: 680-160018-15

Date Collected: 10/30/18 12:55

Matrix: Water

Date Received: 11/01/18 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		2	5 mL	5 mL	547061	11/10/18 18:51	Y1S	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	547315	11/12/18 19:23	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		2	5 mL	5 mL	547542	11/15/18 01:00	UI	TAL SAV
	Instrument ID: CICK									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:59	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:16	BWR	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	436412	11/05/18 19:50	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	546191	11/05/18 03:47	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			436636	11/07/18 03:27	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			437230	11/09/18 23:39	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-13-03X_Fal18

Lab Sample ID: 680-160018-16

Date Collected: 10/30/18 12:35

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 17:42	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: XSA-12-96X_Fal18

Lab Sample ID: 680-160018-17

Date Collected: 10/31/18 10:50

Matrix: Water

Date Received: 11/01/18 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	547061	11/10/18 18:05	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 02:18	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:24	BWR	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Client Sample ID: G6M-03-08X_Fal18

Lab Sample ID: 680-160018-18

Date Collected: 10/31/18 12:55
Matrix: Water
Date Received: 11/01/18 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	547061	11/10/18 18:28	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546444	11/06/18 12:56	AJR	TAL SAV
Dissolved	Analysis	6010C		1			547169	11/10/18 00:54	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546443	11/06/18 12:56	AJR	TAL SAV
Dissolved	Analysis	6020A		1			546780	11/07/18 21:05	BWR	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-EB05_Fal18

Lab Sample ID: 680-160018-19

Date Collected: 10/31/18 13:10
Matrix: Water
Date Received: 11/01/18 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	547304	11/13/18 12:43	Y1S	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	546175	11/04/18 11:13	BCB	TAL SAV
Dissolved	Analysis	6010C		1			546954	11/08/18 01:54	BCB	TAL SAV
	Instrument ID: ICPE									
Dissolved	Prep	3005A			50 mL	250 mL	546176	11/04/18 11:14	BCB	TAL SAV
Dissolved	Analysis	6020A		1			546426	11/06/18 06:05	BWR	TAL SAV
	Instrument ID: ICPMSD									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

KGS

Project Name: Long Term Monitoring
Project Number: DEVNS-LTM
WBS Code: Purchase Order 18-706

Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:


680-160018 Chain of Custody

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Event: KGS, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	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					
1	GWM-02-01X_FALL8	WG	10.29.18	0915					X	X	X				GWM-02-01X	GW			1
2	MW-3_FALL8	WG	10.29.18	1105					X	X	X				MW-3	GW			1
3	GWM-03-07X_FALL8	WG	10.29.18	1255		X	X	X	X	X	X	X	X	X	GWM-03-07X	GW			1
4	XSA-12-97X_FALL8	WG	10.30.18	0900					X	X	X				XSA-12-97X	GW			1
5	GWM-04-01X_FALL8	WG	10.30.18	1135					X	X	X				GWM-04-01X	GW			1
6	GWM-04-03X_FALL8	WQ	10.30.18	1240					X	X	X				~~FIELDQC~~ GWM-04-03X	~~FD~~ GW	~~0~~	~~0~~	1
		Turnaround Time:																	

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/31/18	1405		1031.18	1405
	1031.18	1700			

Received by Laboratory: *signature, date, time*
11.1.18 0950
1.4/2.0 ; 1.7/2.3

11/15/2018

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

KGS

Project Name: Long Term Monitoring
Project Number: DEVNS-LTM
WBS Code: Purchase Order 18-706

Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

Event: KGS, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	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					
1	G6M-97-05B_FALL8	WG	10/30/18	0840	OJ		X	X	X	X	X	X	X	X	X	G6M-97-05B	N			1
2	G6M-04-02X_FALL8	WG	10/30/18	1245	OJ		X	X	X	X	X	X	X	X	X	G6M-04-02X	N			1
3	AOC50-DUP02-FALL8	WG	10/30/18	1255	OJ		X	X	X	X	X	X	X	X	X	FIELDQC	FD			1
4		WG																		1
5		WG																		1
6	~~FIELDQC~~	~~WQ~~										X				~~FIELDQC~~	~~TB~~	~~0~~	~~0~~	~~1~~
		Turnaround Time:																		

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/30/18	1400		10/30/18	1400
	10/31/18	1405		10/31/18	1405
	10/31/18	1840			

Received by Laboratory: *signature, date, time* — 11.1.18 0950

11/15/2018

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

KGS

Project Name: Long Term Monitoring
Project Number: DEVNS-LTM
WBS Code: Purchase Order 18-706

Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:
Cool to 4°C

Equipment:
PTef tubing
1.75" Bladder Pump

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

Analytical Test Method

Event: KGS, Long Term Monitoring, AOC 50 Fall 2018

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	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
1	G6M-13-04X-FAL18	WG	10/29/18	0955	B/A	G6M-13-04X	N			1
2	G6M-13-01X-FAL18	WG	10/29/18	1220	B/A	G6M-13-01X	N			1
3	MW-7-FAL18	WG	10/29/18	1455	B/A	MW-7	N			1
4	AOC50-DUP05-FAL18	WG	10/29/18	1230	B/A	FIELDQC	FD			1
5	G6M-EB04-FAL18	WG	10/29/18	1530	B/A	FIELDQC	EB			1
6	G6M-TB06-FAL18	WQ	10/29/18			FIELDQC	TB	0	0	1
		Turnaround Time:								

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/30/18	1400		10/30/18	1400
	10/31/18	1405		10/31/18	1505
	10/31/18	1800			

Received by Laboratory: *signature, date, time* 11.1.18 0950

11/15/2018

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

360325-Boston

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4, Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2, Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2, Cool < 6°C

					Analytical Test Method	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	SW9056A - SO4	SW9060A - TOC				
	Event: KGS, Long Term Monitoring, AOC 50 Fall 2018					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	G6M-13-03X-FALL18	WG	10/30/18	1235	B1A						X				G6M-13-03X	N1			1
2		WG																	1
3		WG																	1
4		WG																	1
5		WG																	1
6		WQ									X				~~FIELDQC~~	TB	0	0	1
		Turnaround Time:																	

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/30/18	1400		10/30/18	1400
	10/31/18	1405		10/31/18	1405
	10/31/18	1800			

Received by Laboratory: *signature, date, time*	
	11.1.18 0950

11/15/2018

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

380325-Bost

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Analytical Test Method

Event: KGS, Long Term Monitoring, AOC 50 Fall 2018

	A2320B - Alkalinity	E353.2 - Nitrite Nitrate as N	RSK175 - Dissolved Gases	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	SW9034 - Sulfide	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
1	XSA-12-96X_FALL8	WG	10/31/18	1050		XSA-12-96X	N			1
2	GWM-03-08X_FALL8	WG	10/31/18	1255		GWM-03-08X	N			1
3	GWM-EB05_FALL8	WG	10/31/18	1310		FIELD QC	EB			1
4		WG								1
5		WG								1
6		WQ				[illegible]	[illegible]	0	0	1
		Turnaround Time:								

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
	10/31/18	1405		10-31-18	1405
	10-31-18	1800			

Received by Laboratory: *signature, date, time* — 11.1.18 0950

11/15/2018

CHAIN-OF-CUSTODY

KOMAN Government Services, LLC
Laurie Ekes
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(508) 366.7442, lekes@komangs.com

KGS

Project Name: Long Term Monitoring
Project Number: DEVNS-LTM
WBS Code: Purchase Order 18-706

Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com
Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Cool to 4°C

680-160018 Chain of Custody

Equipment:

PTef. tubing
1.75" Bladder Pump

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
10	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
46	1* 250mL, plastic, Cool < 6°C
47	1* 500mL, amber glass, H2SO4; Cool < 6°C
5	1* 125mL plastic, Cool < 6°C
7	2* 250mL plastic, ZnAc/NaOH Cool < 6°C
8	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Event: KGS, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	A2320B - Alkalinity (46)	E353.2 - Nitrite Nitrate as N (47)	RSK175 - Dissolved Gases (8)	SW6010C/FLDFLT - Fe Mn (9)	SW6020A/FLDFLT - As (9)	SW8260C - VOCs (29)	SW9034 - Sulfide (7)	SW9056A - SO4 (5)	SW9060A - TOC (10)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler
1	G6M-13-04X-FAL18	WG	10/25/18	0955	B/A	X	X	X	X	X	X	X	X	X	G6M-13-04X	N			1
2	G6M-13-01X-FAL18	WG	10/29/18	1220	B/A	X	X	X	X	X	X	X	X	X	G6M-13-01X	N			1
3	MW-7-FAL18	WG	10/25/18	1455	B/A				X	X	X				MW-7	N			1
4	AOC50-DUP05-FAL18	WG	10/25/18	1230	B/A	X	X	X	X	X	X	X	X	X	FIELDQC	FD			1
5	G6M-EB04-FAL18	WG	10/25/18	1530	B/A				X	X	X				FIELDQC	EB			1
6	G6M-TB06-FAL18	WQ	10/29/18								X				FIELDQC	TB	0	0	1
		Turnaround Time:																	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	10/30/18	1400		10/30/18	1400
	10/31/18	1405		10/31/18	1405
	10/31/18	1845			

Received by Laboratory: *signature, date, time* 11/1/18 0930

11/15/2018

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-160018-1

Login Number: 160018

List Source: TestAmerica Savannah

List Number: 1

Creator: Ragnaldsen, Amy E

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.	N/A	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50

TestAmerica Job ID: 680-160018-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-159735-1
Client Project/Site: Devens - LTM / AOC 50 Fall 2018
Revision: 1

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Authorized for release by:
12/27/2018 3:43:24 PM

Jerry Lanier, Project Manager I
(912)250-0281
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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.

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Receipt Checklists 100
Certification Summary 102

Job ID: 680-159735-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Devens - LTM / AOC 50 Fall 2018

Report Number: 680-159735-1

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 10/25/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.1 C.

The final report was revised to edit the sample IDs for the MS/MSD to remove "_MS" and "_MSD" from the ID so that it will match the parent ID.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-13-02X_FAL18 (680-159735-1), G6M-04-22X_FAL18 (680-159735-4), G6M-04-31X_FAL18 (680-159735-5), G6M_TB04 (680-159735-6), AOC50-DUP01_FAL18 (680-159735-7), G6M-04-07X_FAL18 (680-159735-8), G6M-04-06X_FAL18 (680-159735-9), XSA-12-95X_FAL18 (680-159735-10), G6M-03-10X_FAL18 (680-159735-11), G6M-04-05X_FAL18 (680-159735-12), G6M-02-12X_FAL18 (680-159735-13), G6M-EB02_FAL18 (680-159735-14), G6M-02-11X_FAL18 (680-159735-15), G6M-04-11X_FAL18 (680-159735-16), G6M-02-07X_FAL18 (680-159735-17), XSA-12-98X_FAL18 (680-159735-18), G6M-02-06X_FAL18 (680-159735-19) and G6M-02-13X_FAL18 (680-159735-20) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/01/2018 and 11/02/2018.

Surrogate recovery for the following sample was outside control limits: G6M-13-02X_FAL18 (680-159735-1). Re-extraction and/or re-analysis was performed with concurring results. The original analysis has been reported.

The continuing calibration verification (CCV) for analytical batch 680-545776 recovered outside control limits for the following analyte: Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. These results have been reported and qualified.(CCV 680-545776/3)

The continuing calibration verification (CCV) associated with batch 680-545781 recovered above the upper control limit for Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The closing calibration verification (CCVC) analyzed in batch 545781 was outside the method criteria for the 12 hour window by 1 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

The continuing calibration verification (CCV) associated with batch 680-545948 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 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-545948 recovered outside control limits for the following analyte(s): Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Job ID: 680-159735-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

The laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-546210 recovered outside control limits for the following analyte(s): Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-545950.

The closing calibration verification (CCV) analyzed in batch 545954 was outside the method criteria for the 12 hour window by 9 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

(CCVC 680-545954/30)

The continuing calibration verification (CCV) associated with batch 680-545954 recovered above the upper control limit for 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 680-546210 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.

Refer to the QC report for details.

Sample G6M-04-07X_FAL18 (680-159735-8)[2X] 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-13-02X_FAL18 (680-159735-1) and G6M-02-13X_FAL18 (680-159735-20) were analyzed for dissolved gases in accordance with RSK-175. The samples were analyzed on 11/04/2018.

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

METALS (ICP) - DISSOLVED

Samples G6M-13-02X_FAL18 (680-159735-1), G6M-04-22X_FAL18 (680-159735-4), G6M-04-31X_FAL18 (680-159735-5), AOC50-DUP01_FAL18 (680-159735-7), G6M-04-07X_FAL18 (680-159735-8), G6M-04-06X_FAL18 (680-159735-9), XSA-12-95X_FAL18 (680-159735-10), G6M-03-10X_FAL18 (680-159735-11), G6M-02-12X_FAL18 (680-159735-13), G6M-EB02_FAL18 (680-159735-14), G6M-02-11X_FAL18 (680-159735-15), G6M-04-11X_FAL18 (680-159735-16), G6M-02-07X_FAL18 (680-159735-17), XSA-12-98X_FAL18 (680-159735-18), G6M-02-06X_FAL18 (680-159735-19) and G6M-02-13X_FAL18 (680-159735-20) were analyzed for Metals (ICP) - Dissolved in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/26/2018 and analyzed on 10/30/2018.

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

METALS (ICPMS) - DISSOLVED

Samples G6M-13-02X_FAL18 (680-159735-1), G6M-04-22X_FAL18 (680-159735-4), G6M-04-31X_FAL18 (680-159735-5), AOC50-DUP01_FAL18 (680-159735-7), G6M-04-07X_FAL18 (680-159735-8), G6M-04-06X_FAL18 (680-159735-9), XSA-12-95X_FAL18 (680-159735-10), G6M-03-10X_FAL18 (680-159735-11), G6M-02-12X_FAL18 (680-159735-13), G6M-EB02_FAL18 (680-159735-14), G6M-02-11X_FAL18 (680-159735-15), G6M-04-11X_FAL18 (680-159735-16), G6M-02-07X_FAL18 (680-159735-17), XSA-12-98X_FAL18 (680-159735-18), G6M-02-06X_FAL18 (680-159735-19) and G6M-02-13X_FAL18 (680-159735-20) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared and analyzed on 10/26/2018.

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

ALKALINITY

Sample G6M-13-02X_FAL18 (680-159735-1) was analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 11/06/2018.

Job ID: 680-159735-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

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

NITRATE-NITRITE AS NITROGEN
Sample G6M-13-02X_FAL18 (680-159735-1) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 10/31/2018.

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

SULFIDE
Sample G6M-13-02X_FAL18 (680-159735-1) was analyzed for sulfide in accordance with EPA SW846 Method 9034. The samples were analyzed on 10/26/2018.

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-13-02X_FAL18 (680-159735-1) was analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 11/05/2018.

The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 680-546216 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of chloride in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Sulfate failed the recovery criteria low for the MS/MSD of sample G6M-13-02X_FAL18 (680-159735-1) in batch 680-546216.

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.

TOTAL ORGANIC CARBON
Sample G6M-13-02X_FAL18 (680-159735-1) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 10/31/2018.

Total Organic Carbon - Duplicates was detected in method blank MB 280-435842/4 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.

Total Organic Carbon - Duplicates failed the recovery criteria low for the MS of sample G6M-13-02X_FAL18 (680-159735-1) in batch 280-435842.

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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159735-1	G6M-13-02X_FAL18	Water	10/24/18 09:15	10/25/18 09:20
680-159735-4	G6M-04-22X_FAL18	Water	10/22/18 11:00	10/25/18 09:20
680-159735-5	G6M-04-31X_FAL18	Water	10/22/18 08:20	10/25/18 09:20
680-159735-6	G6M_TB04	Water	10/24/18 00:00	10/25/18 09:20
680-159735-7	AOC50-DUP01_FAL18	Water	10/22/18 08:30	10/25/18 09:20
680-159735-8	G6M-04-07X_FAL18	Water	10/22/18 13:30	10/25/18 09:20
680-159735-9	G6M-04-06X_FAL18	Water	10/22/18 14:20	10/25/18 09:20
680-159735-10	XSA-12-95X_FAL18	Water	10/23/18 09:00	10/25/18 09:20
680-159735-11	G6M-03-10X_FAL18	Water	10/23/18 10:15	10/25/18 09:20
680-159735-12	G6M-04-05X_FAL18	Water	10/23/18 11:15	10/25/18 09:20
680-159735-13	G6M-02-12X_FAL18	Water	10/23/18 13:00	10/25/18 09:20
680-159735-14	G6M-EB02_FAL18	Water	10/23/18 13:15	10/25/18 09:20
680-159735-15	G6M-02-11X_FAL18	Water	10/23/18 14:10	10/25/18 09:20
680-159735-16	G6M-04-11X_FAL18	Water	10/22/18 11:30	10/25/18 09:20
680-159735-17	G6M-02-07X_FAL18	Water	10/23/18 09:40	10/25/18 09:20
680-159735-18	XSA-12-98X_FAL18	Water	10/23/18 11:35	10/25/18 09:20
680-159735-19	G6M-02-06X_FAL18	Water	10/22/18 13:55	10/25/18 09:20
680-159735-20	G6M-02-13X_FAL18	Water	10/24/18 12:10	10/25/18 09:20

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

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 = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
D	The reported value is from a dilution.

GC VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.

HPLC/IC

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: G6M-13-02X_FAL18
Date Collected: 10/24/18 09:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:15	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 14:15	1
1,1,2-Trichloroethane	0.50	U M	1.0	0.50	0.33	ug/L		11/01/18 14:15	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 14:15	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 14:15	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 14:15	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 14:15	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 14:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 14:15	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:15	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 14:15	1
1,2-Dichloroethene, Total	**25**		2.0	1.0	0.74	ug/L		11/01/18 14:15	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 14:15	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 14:15	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:15	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 14:15	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 14:15	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:15	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 14:15	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 14:15	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 14:15	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:15	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 14:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 14:15	1
Acetone	**86**		10	10	7.0	ug/L		11/01/18 14:15	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:15	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 14:15	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:15	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 14:15	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 14:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 14:15	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:15	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 14:15	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 14:15	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 14:15	1
cis-1,2-Dichloroethene	**24**		1.0	1.0	0.41	ug/L		11/01/18 14:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 14:15	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:15	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 14:15	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 14:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 14:15	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 14:15	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:15	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-13-02X_FAL18
Date Collected: 10/24/18 09:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 14:15	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:15	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:15	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 14:15	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 14:15	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 14:15	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:15	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 14:15	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:15	1
Tetrachloroethene	**28**		1.0	1.0	0.74	ug/L		11/01/18 14:15	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 14:15	1
trans-1,2-Dichloroethene	**1.0**	**M**	1.0	1.0	0.37	ug/L		11/01/18 14:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:15	1
Trichloroethene	**9.6**		1.0	1.0	0.48	ug/L		11/01/18 14:15	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:15	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/01/18 14:15	1
Vinyl chloride	**3.5**		1.0	1.0	0.50	ug/L		11/01/18 14:15	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*80*	*Q*	*81 - 118*		*11/01/18 14:15*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/01/18 14:15*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/01/18 14:15*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/01/18 14:15*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.6**		1.1	1.1	0.55	ug/L		11/04/18 14:06	1
Ethylene	**1.3**		1.0	1.0	0.50	ug/L		11/04/18 14:06	1
Methane (TCD)	**6700**		390	77	39	ug/L		11/04/18 14:06	1

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	**10**	**J1**	1.0	1.0	0.40	mg/L		11/05/18 15:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1000**		50	50	17	ug/L		10/30/18 20:46	1
Manganese	**160**		10	3.0	1.0	ug/L		10/30/18 20:46	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.6**		3.0	3.0	1.5	ug/L		10/26/18 18:15	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	**0.095**	**J**	0.10	0.050	0.019	mg/L		10/31/18 19:28	1
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/26/18 03:41	1
Total Organic Carbon - Duplicates	**29**	**J1**	1.0	0.50	0.16	mg/L		10/31/18 19:31	1
Alkalinity	**67**		5.0	5.0	1.1	mg/L		11/06/18 22:44	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-22X_FAL18
Date Collected: 10/22/18 11:00
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:40	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 14:40	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 14:40	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 14:40	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 14:40	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 14:40	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 14:40	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 14:40	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 14:40	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:40	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 14:40	1
1,2-Dichloroethene, Total	**2.8**		2.0	1.0	0.74	ug/L		11/01/18 14:40	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 14:40	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 14:40	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:40	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 14:40	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 14:40	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:40	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 14:40	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 14:40	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 14:40	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:40	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 14:40	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 14:40	1
Acetone	**14**		10	10	7.0	ug/L		11/01/18 14:40	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:40	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 14:40	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 14:40	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 14:40	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 14:40	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 14:40	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:40	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 14:40	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 14:40	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 14:40	1
cis-1,2-Dichloroethene	**2.8**		1.0	1.0	0.41	ug/L		11/01/18 14:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 14:40	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:40	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 14:40	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 14:40	1
Ethylbenzene	**0.58**	**J**	1.0	0.50	0.33	ug/L		11/01/18 14:40	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 14:40	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:40	1

Client Sample ID: G6M-04-22X_FAL18

Lab Sample ID: 680-159735-4
Date Collected: 10/22/18 11:00
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 14:40	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 14:40	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 14:40	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 14:40	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 14:40	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 14:40	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:40	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 14:40	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 14:40	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 14:40	1
Toluene	**57**		1.0	1.0	0.48	ug/L		11/01/18 14:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 14:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:40	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 14:40	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 14:40	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/01/18 14:40	1
Vinyl chloride	**3.4**		1.0	1.0	0.50	ug/L		11/01/18 14:40	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*81 - 118*		*11/01/18 14:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/01/18 14:40*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*11/01/18 14:40*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/01/18 14:40*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**140000**		50	50	17	ug/L		10/30/18 22:05	1
Manganese	**760**		10	3.0	1.0	ug/L		10/30/18 22:05	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**820**		3.0	3.0	1.5	ug/L		10/26/18 19:12	1

Client Sample ID: G6M-04-31X_FAL18

Lab Sample ID: 680-159735-5
Date Collected: 10/22/18 08:20
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:51	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 02:51	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:51	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 02:51	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 02:51	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 02:51	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 02:51	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-31X_FAL18
Date Collected: 10/22/18 08:20
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 02:51	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 02:51	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:51	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 02:51	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 02:51	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 02:51	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 02:51	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:51	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 02:51	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 02:51	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:51	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 02:51	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 02:51	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 02:51	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:51	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 02:51	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 02:51	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 02:51	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:51	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:51	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:51	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 02:51	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:51	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 02:51	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:51	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 02:51	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:51	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 02:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 02:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 02:51	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:51	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 02:51	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 02:51	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:51	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 02:51	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:51	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 02:51	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:51	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:51	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 02:51	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 02:51	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 02:51	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:51	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 02:51	1

Client Sample ID: G6M-04-31X_FAL18

Lab Sample ID: 680-159735-5

Date Collected: 10/22/18 08:20

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:51	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 02:51	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 02:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:51	1
Trichloroethene	**0.58**	**J**	1.0	1.0	0.48	ug/L		11/02/18 02:51	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:51	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 02:51	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:51	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/02/18 02:51*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/02/18 02:51*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/02/18 02:51*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 02:51*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**60000**		50	50	17	ug/L		10/30/18 22:47	1
Manganese	**6800**		10	3.0	1.0	ug/L		10/30/18 22:47	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**370**		3.0	3.0	1.5	ug/L		10/26/18 19:43	1

Client Sample ID: G6M_TB04

Lab Sample ID: 680-159735-6

Date Collected: 10/24/18 00:00

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:04	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 02:04	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:04	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 02:04	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 02:04	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 02:04	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 02:04	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 02:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 02:04	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:04	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 02:04	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 02:04	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 02:04	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 02:04	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:04	1

Client Sample ID: G6M_TB04
Date Collected: 10/24/18 00:00
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-6
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 02:04	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 02:04	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:04	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 02:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 02:04	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 02:04	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:04	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 02:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 02:04	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 02:04	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:04	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:04	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 02:04	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 02:04	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 02:04	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:04	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 02:04	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:04	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 02:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 02:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 02:04	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:04	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 02:04	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 02:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 02:04	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 02:04	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:04	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 02:04	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 02:04	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 02:04	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 02:04	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 02:04	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 02:04	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:04	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 02:04	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 02:04	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 02:04	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 02:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 02:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:04	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 02:04	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 02:04	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 02:04	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 02:04	1

Client Sample ID: G6M_TB04

Lab Sample ID: 680-159735-6
Date Collected: 10/24/18 00:00
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 02:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/02/18 02:04*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/02/18 02:04*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 02:04*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 02:04*	*1*

Client Sample ID: AOC50-DUP01_FAL18

Lab Sample ID: 680-159735-7
Date Collected: 10/22/18 08:30
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 03:37	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 03:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 03:37	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 03:37	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 03:37	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 03:37	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 03:37	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 03:37	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 03:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 03:37	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 03:37	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 03:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 03:37	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 03:37	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 03:37	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 03:37	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 03:37	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 03:37	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 03:37	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 03:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 03:37	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 03:37	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 03:37	1
4-Isopropyltoluene	**2.2**		1.0	1.0	0.48	ug/L		11/02/18 03:37	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 03:37	1
Acetone	**11**		10	10	7.0	ug/L		11/02/18 03:37	1
Benzene	**1.5**		1.0	1.0	0.43	ug/L		11/02/18 03:37	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 03:37	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 03:37	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 03:37	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 03:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 03:37	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 03:37	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: AOC50-DUP01_FAL18
Date Collected: 10/22/18 08:30
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 03:37	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 03:37	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 03:37	1
cis-1,2-Dichloroethene	**0.44**	**J**	1.0	1.0	0.41	ug/L		11/02/18 03:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 03:37	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 03:37	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 03:37	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 03:37	1
Ethylbenzene	**0.43**	**J**	1.0	0.50	0.33	ug/L		11/02/18 03:37	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 03:37	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
Isopropylbenzene	**110**		1.0	1.0	0.35	ug/L		11/02/18 03:37	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 03:37	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
m-Xylene & p-Xylene	1.0	U M	1.0	1.0	0.35	ug/L		11/02/18 03:37	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 03:37	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 03:37	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 03:37	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 03:37	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 03:37	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 03:37	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 03:37	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 03:37	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 03:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 03:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 03:37	1
Trichloroethene	**0.57**	**J**	1.0	1.0	0.48	ug/L		11/02/18 03:37	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 03:37	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 03:37	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 03:37	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 03:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/02/18 03:37*	*1*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*		*11/02/18 03:37*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 03:37*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 03:37*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**59000**		50	50	17	ug/L		10/30/18 21:28	1
Manganese	**6700**		10	3.0	1.0	ug/L		10/30/18 21:28	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**360**		3.0	3.0	1.5	ug/L		10/26/18 18:53	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-07X_FAL18
Date Collected: 10/22/18 13:30
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/02/18 07:06	2
1,1,1-Trichloroethane	2.0	U	2.0	2.0	0.74	ug/L		11/02/18 07:06	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	2.0	1.2	ug/L		11/02/18 07:06	2
1,1,2-Trichloroethane	1.0	U	2.0	1.0	0.66	ug/L		11/02/18 07:06	2
1,1-Dichloroethane	2.0	U	2.0	2.0	0.76	ug/L		11/02/18 07:06	2
1,1-Dichloroethene	2.0	U	2.0	2.0	0.72	ug/L		11/02/18 07:06	2
1,1-Dichloropropene	2.0	U M	2.0	2.0	0.68	ug/L		11/02/18 07:06	2
1,2,3-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
1,2,3-Trichloropropane	2.0	U	2.0	2.0	0.78	ug/L		11/02/18 07:06	2
1,2,4-Trichlorobenzene	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
1,2,4-Trimethylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/02/18 07:06	2
1,2-Dibromo-3-Chloropropane	4.0	U	10	4.0	2.2	ug/L		11/02/18 07:06	2
1,2-Dichlorobenzene	2.0	U	2.0	2.0	0.74	ug/L		11/02/18 07:06	2
1,2-Dichloroethane	2.0	U M	2.0	2.0	1.0	ug/L		11/02/18 07:06	2
1,2-Dichloroethene, Total	**120**	**D**	4.0	2.0	1.5	ug/L		11/02/18 07:06	2
1,2-Dichloropropane	2.0	U	2.0	2.0	1.3	ug/L		11/02/18 07:06	2
1,3,5-Trimethylbenzene	1.0	U	2.0	1.0	0.62	ug/L		11/02/18 07:06	2
1,3-Dichlorobenzene	2.0	U	2.0	2.0	0.86	ug/L		11/02/18 07:06	2
1,3-Dichloropropane	2.0	U	2.0	2.0	0.68	ug/L		11/02/18 07:06	2
1,4-Dichlorobenzene	2.0	U	2.0	2.0	0.92	ug/L		11/02/18 07:06	2
2,2-Dichloropropane	2.0	U	2.0	2.0	0.74	ug/L		11/02/18 07:06	2
2-Butanone (MEK)	20	U	20	20	6.8	ug/L		11/02/18 07:06	2
2-Chlorotoluene	1.0	U	2.0	1.0	0.54	ug/L		11/02/18 07:06	2
2-Hexanone	10	U	20	10	4.0	ug/L		11/02/18 07:06	2
4-Chlorotoluene	2.0	U	2.0	2.0	0.90	ug/L		11/02/18 07:06	2
4-Isopropyltoluene	2.0	U	2.0	2.0	0.96	ug/L		11/02/18 07:06	2
4-Methyl-2-pentanone (MIBK)	10	U	20	10	4.2	ug/L		11/02/18 07:06	2
Acetone	20	U	20	20	14	ug/L		11/02/18 07:06	2
Benzene	2.0	U	2.0	2.0	0.86	ug/L		11/02/18 07:06	2
Bromobenzene	2.0	U	2.0	2.0	1.0	ug/L		11/02/18 07:06	2
Bromoform	2.0	U	2.0	2.0	0.86	ug/L		11/02/18 07:06	2
Bromomethane	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
Carbon disulfide	4.0	U	4.0	4.0	0.86	ug/L		11/02/18 07:06	2
Carbon tetrachloride	1.0	U	2.0	1.0	0.66	ug/L		11/02/18 07:06	2
Chlorobenzene	1.0	U	2.0	1.0	0.52	ug/L		11/02/18 07:06	2
Chlorobromomethane	2.0	U	2.0	2.0	0.90	ug/L		11/02/18 07:06	2
Chlorodibromomethane	1.0	U	2.0	1.0	0.64	ug/L		11/02/18 07:06	2
Chloroethane	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
Chloroform	2.0	U	2.0	2.0	1.0	ug/L		11/02/18 07:06	2
Chloromethane	2.0	U	2.0	2.0	0.80	ug/L		11/02/18 07:06	2
cis-1,2-Dichloroethene	**120**	**D**	2.0	2.0	0.82	ug/L		11/02/18 07:06	2
cis-1,3-Dichloropropene	2.0	U	2.0	2.0	0.80	ug/L		11/02/18 07:06	2
Dibromomethane	2.0	U	2.0	2.0	0.70	ug/L		11/02/18 07:06	2
Dichlorobromomethane	2.0	U	2.0	2.0	0.88	ug/L		11/02/18 07:06	2
Dichlorodifluoromethane	2.0	U	2.0	2.0	1.2	ug/L		11/02/18 07:06	2
Ethylbenzene	1.0	U	2.0	1.0	0.66	ug/L		11/02/18 07:06	2
Ethylene Dibromide	2.0	U	2.0	2.0	0.88	ug/L		11/02/18 07:06	2
Hexachlorobutadiene	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
Isopropylbenzene	**2.4**	**D**	2.0	2.0	0.70	ug/L		11/02/18 07:06	2

Client Sample ID: G6M-04-07X_FAL18

Lab Sample ID: 680-159735-8
Date Collected: 10/22/18 13:30
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	1.0	U	20	1.0	0.60	ug/L		11/02/18 07:06	2
Methylene Chloride	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
m-Xylene & p-Xylene	2.0	U	2.0	2.0	0.70	ug/L		11/02/18 07:06	2
Naphthalene	10	U	10	10	5.0	ug/L		11/02/18 07:06	2
n-Butylbenzene	2.0	U	2.0	2.0	0.94	ug/L		11/02/18 07:06	2
N-Propylbenzene	2.0	U	2.0	2.0	0.76	ug/L		11/02/18 07:06	2
o-Xylene	1.0	U	2.0	1.0	0.46	ug/L		11/02/18 07:06	2
sec-Butylbenzene	2.0	U	2.0	2.0	0.84	ug/L		11/02/18 07:06	2
Styrene	1.0	U	2.0	1.0	0.54	ug/L		11/02/18 07:06	2
tert-Butylbenzene	2.0	U	2.0	2.0	0.90	ug/L		11/02/18 07:06	2
Tetrachloroethene	**15**	**D**	2.0	2.0	1.5	ug/L		11/02/18 07:06	2
Toluene	2.0	U	2.0	2.0	0.96	ug/L		11/02/18 07:06	2
trans-1,2-Dichloroethene	2.0	U	2.0	2.0	0.74	ug/L		11/02/18 07:06	2
trans-1,3-Dichloropropene	2.0	U	2.0	2.0	0.84	ug/L		11/02/18 07:06	2
Trichloroethene	**47**	**D**	2.0	2.0	0.96	ug/L		11/02/18 07:06	2
Trichlorofluoromethane	2.0	U	2.0	2.0	0.84	ug/L		11/02/18 07:06	2
Vinyl acetate	4.0	U	4.0	4.0	1.6	ug/L		11/02/18 07:06	2
Vinyl chloride	**4.4**	**D**	2.0	2.0	1.0	ug/L		11/02/18 07:06	2
Xylenes, Total	1.0	U	4.0	1.0	0.46	ug/L		11/02/18 07:06	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/02/18 07:06*	*2*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/02/18 07:06*	*2*
Dibromofluoromethane (Surr)	*112*		*80 - 119*		*11/02/18 07:06*	*2*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/02/18 07:06*	*2*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**1500**		50	50	17	ug/L		10/30/18 22:00	1
Manganese	**4200**		10	3.0	1.0	ug/L		10/30/18 22:00	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**18**		3.0	3.0	1.5	ug/L		10/26/18 19:09	1

Client Sample ID: G6M-04-06X_FAL18

Lab Sample ID: 680-159735-9
Date Collected: 10/22/18 14:20
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:38	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:38	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 12:38	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:38	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:38	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 12:38	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:38	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 12:38	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-06X_FAL18
Date Collected: 10/22/18 14:20
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:38	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 12:38	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:38	1
1,2-Dichloroethane	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:38	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 12:38	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 12:38	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 12:38	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 12:38	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:38	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 12:38	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:38	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 12:38	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:38	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 12:38	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:38	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:38	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 12:38	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 12:38	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 12:38	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:38	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 12:38	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 12:38	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:38	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 12:38	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:38	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 12:38	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:38	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 12:38	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:38	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:38	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:38	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		11/02/18 12:38	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:38	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:38	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:38	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 12:38	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:38	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:38	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:38	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:38	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 12:38	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:38	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:38	1

Client Sample ID: G6M-04-06X_FAL18

Lab Sample ID: 680-159735-9

Date Collected: 10/22/18 14:20

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:38	1
Tetrachloroethene	**1.4**		1.0	1.0	0.74	ug/L		11/02/18 12:38	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:38	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:38	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:38	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:38	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 12:38	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:38	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/02/18 12:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/02/18 12:38*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/02/18 12:38*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/02/18 12:38*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/30/18 21:23	1
Manganese	**62**		10	3.0	1.0	ug/L		10/30/18 21:23	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 18:42	1

Client Sample ID: XSA-12-95X_FAL18

Lab Sample ID: 680-159735-10

Date Collected: 10/23/18 09:00

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:11	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 11:11	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:11	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:11	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 11:11	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:11	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 11:11	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:11	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 11:11	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:11	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 11:11	1
1,2-Dichloroethene, Total	**13**		2.0	1.0	0.74	ug/L		11/02/18 11:11	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 11:11	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 11:11	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:11	1

Client Sample ID: XSA-12-95X_FAL18
Date Collected: 10/23/18 09:00
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-10
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:11	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 11:11	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:11	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 11:11	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:11	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 11:11	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:11	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:11	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 11:11	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 11:11	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:11	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:11	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:11	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 11:11	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:11	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 11:11	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:11	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 11:11	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:11	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:11	1
cis-1,2-Dichloroethene	**11**		1.0	1.0	0.41	ug/L		11/02/18 11:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:11	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:11	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:11	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 11:11	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:11	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:11	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:11	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 11:11	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:11	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:11	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:11	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:11	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 11:11	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:11	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:11	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:11	1
Tetrachloroethene	**13**		1.0	1.0	0.74	ug/L		11/02/18 11:11	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:11	1
trans-1,2-Dichloroethene	**2.2**		1.0	1.0	0.37	ug/L		11/02/18 11:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:11	1
Trichloroethene	**5.0**		1.0	1.0	0.48	ug/L		11/02/18 11:11	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:11	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 11:11	1
Vinyl chloride	**1.9**	**M**	1.0	1.0	0.50	ug/L		11/02/18 11:11	1

Client Sample ID: XSA-12-95X_FAL18

Lab Sample ID: 680-159735-10
Date Collected: 10/23/18 09:00
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 11:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/02/18 11:11*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 11:11*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 11:11*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/02/18 11:11*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**3300**		50	50	17	ug/L		10/30/18 21:17	1
Manganese	**11000**		10	3.0	1.0	ug/L		10/30/18 21:17	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**3.2**		3.0	3.0	1.5	ug/L		10/26/18 18:38	1

Client Sample ID: G6M-03-10X_FAL18

Lab Sample ID: 680-159735-11
Date Collected: 10/23/18 10:15
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:08	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 12:08	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:08	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:08	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 12:08	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:08	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 12:08	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 12:08	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:08	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 12:08	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 12:08	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 12:08	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 12:08	1
1,3-Dichlorobenzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 12:08	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:08	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 12:08	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:08	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 12:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:08	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 12:08	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:08	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 12:08	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-03-10X_FAL18
Date Collected: 10/23/18 10:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Acetone	10	U	10	10	7.0	ug/L		11/02/18 12:08	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 12:08	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:08	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 12:08	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 12:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 12:08	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:08	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 12:08	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:08	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 12:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:08	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:08	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:08	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 12:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:08	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:08	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:08	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 12:08	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:08	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:08	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:08	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:08	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 12:08	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:08	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:08	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:08	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 12:08	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:08	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:08	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:08	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 12:08	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:08	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 12:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 12:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/02/18 12:08*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 119*		*11/02/18 12:08*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/02/18 12:08*	*1*

Client Sample ID: G6M-03-10X_FAL18

Lab Sample ID: 680-159735-11
Date Collected: 10/23/18 10:15
Matrix: Water
Date Received: 10/25/18 09:20

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	51000		50	50	17	ug/L		10/30/18 22:31	1
Manganese	1900		10	3.0	1.0	ug/L		10/30/18 22:31	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	380		3.0	3.0	1.5	ug/L		10/26/18 19:39	1

Client Sample ID: G6M-04-05X_FAL18

Lab Sample ID: 680-159735-12
Date Collected: 10/23/18 11:15
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:30	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 19:30	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:30	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 19:30	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 19:30	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 19:30	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 19:30	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 19:30	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 19:30	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:30	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 19:30	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 19:30	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 19:30	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 19:30	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:30	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 19:30	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 19:30	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:30	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 19:30	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 19:30	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 19:30	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:30	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:30	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 19:30	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 19:30	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:30	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:30	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:30	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 19:30	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:30	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 19:30	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:30	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 19:30	1

Client Sample ID: G6M-04-05X_FAL18

Lab Sample ID: 680-159735-12

Date Collected: 10/23/18 11:15

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:30	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 19:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 19:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 19:30	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:30	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 19:30	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 19:30	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:30	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 19:30	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:30	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 19:30	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:30	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:30	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 19:30	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 19:30	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 19:30	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:30	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 19:30	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:30	1
Tetrachloroethene	**1.2**		1.0	1.0	0.74	ug/L		11/01/18 19:30	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:30	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:30	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:30	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 19:30	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:30	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/01/18 19:30*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/01/18 19:30*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/01/18 19:30*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/01/18 19:30*	*1*

Client Sample ID: G6M-02-12X_FAL18

Lab Sample ID: 680-159735-13

Date Collected: 10/23/18 13:00

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:54	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 19:54	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:54	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 19:54	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 19:54	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-02-12X_FAL18
Date Collected: 10/23/18 13:00
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 19:54	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 19:54	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 19:54	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 19:54	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:54	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 19:54	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 19:54	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 19:54	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 19:54	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:54	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 19:54	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 19:54	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 19:54	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 19:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 19:54	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 19:54	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:54	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:54	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 19:54	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 19:54	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:54	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:54	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 19:54	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 19:54	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 19:54	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:54	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 19:54	1
Chloroethane	5.0	U M	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:54	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 19:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 19:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 19:54	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:54	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 19:54	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 19:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 19:54	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 19:54	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:54	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 19:54	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 19:54	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 19:54	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 19:54	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 19:54	1

Client Sample ID: G6M-02-12X_FAL18

Lab Sample ID: 680-159735-13

Date Collected: 10/23/18 13:00

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 19:54	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:54	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 19:54	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 19:54	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 19:54	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:54	1
trans-1,2-Dichloroethene	**0.39**	**J**	1.0	1.0	0.37	ug/L		11/01/18 19:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:54	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 19:54	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 19:54	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 19:54	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 19:54	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/01/18 19:54*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/01/18 19:54*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/01/18 19:54*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*11/01/18 19:54*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**40000**		50	50	17	ug/L		10/30/18 22:26	1
Manganese	**7800**		10	3.0	1.0	ug/L		10/30/18 22:26	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**590**		3.0	3.0	1.5	ug/L		10/26/18 19:28	1

Client Sample ID: G6M-EB02_FAL18

Lab Sample ID: 680-159735-14

Date Collected: 10/23/18 13:15

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 20:17	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 20:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 20:17	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 20:17	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 20:17	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 20:17	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 20:17	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 20:17	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 20:17	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 20:17	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 20:17	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 20:17	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 20:17	1

Client Sample ID: G6M-EB02_FAL18
Date Collected: 10/23/18 13:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-14
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 20:17	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 20:17	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 20:17	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 20:17	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 20:17	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 20:17	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 20:17	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 20:17	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 20:17	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 20:17	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 20:17	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 20:17	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 20:17	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 20:17	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 20:17	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 20:17	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 20:17	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 20:17	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 20:17	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 20:17	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 20:17	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 20:17	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 20:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 20:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 20:17	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 20:17	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 20:17	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 20:17	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 20:17	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 20:17	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 20:17	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 20:17	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 20:17	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 20:17	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 20:17	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 20:17	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 20:17	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 20:17	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 20:17	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 20:17	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 20:17	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 20:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 20:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 20:17	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 20:17	1

Client Sample ID: G6M-EB02_FAL18

Lab Sample ID: 680-159735-14

Date Collected: 10/23/18 13:15

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 20:17	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 20:17	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 20:17	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 20:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*11/01/18 20:17*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/01/18 20:17*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/01/18 20:17*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/01/18 20:17*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	43	J	50	50	17	ug/L		10/30/18 22:10	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/30/18 22:10	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 19:16	1

Client Sample ID: G6M-02-11X_FAL18

Lab Sample ID: 680-159735-15

Date Collected: 10/23/18 14:10

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:00	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 04:00	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:00	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:00	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 04:00	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 04:00	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 04:00	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:00	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 04:00	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:00	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 04:00	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 04:00	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 04:00	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 04:00	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:00	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 04:00	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 04:00	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:00	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 04:00	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:00	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 04:00	1

Client Sample ID: G6M-02-11X_FAL18
Date Collected: 10/23/18 14:10
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-15
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:00	1
4-Isopropyltoluene	**0.60**	**J**	1.0	1.0	0.48	ug/L		11/02/18 04:00	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 04:00	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 04:00	1
Benzene	**0.45**	**J**	1.0	1.0	0.43	ug/L		11/02/18 04:00	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:00	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:00	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 04:00	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:00	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 04:00	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:00	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 04:00	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:00	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 04:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:00	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:00	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:00	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 04:00	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:00	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:00	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
Isopropylbenzene	**22**		1.0	1.0	0.35	ug/L		11/02/18 04:00	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 04:00	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:00	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:00	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:00	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:00	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 04:00	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:00	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:00	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:00	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 04:00	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:00	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:00	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:00	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 04:00	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:00	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 04:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/02/18 04:00*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/02/18 04:00*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/02/18 04:00*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 04:00*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	38000		50	50	17	ug/L		10/30/18 22:21	1
Manganese	8800		10	3.0	1.0	ug/L		10/30/18 22:21	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	480		3.0	3.0	1.5	ug/L		10/26/18 19:24	1

Client Sample ID: G6M-04-11X_FAL18

Lab Sample ID: 680-159735-16

Date Collected: 10/22/18 11:30

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:23	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 04:23	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:23	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:23	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 04:23	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 04:23	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 04:23	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:23	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 04:23	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:23	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 04:23	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 04:23	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 04:23	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 04:23	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:23	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 04:23	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 04:23	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:23	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 04:23	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:23	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 04:23	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:23	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:23	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 04:23	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 04:23	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:23	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:23	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:23	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 04:23	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:23	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 04:23	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:23	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 04:23	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:23	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 04:23	1

Client Sample ID: G6M-04-11X_FAL18

Date Collected: 10/22/18 11:30
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-16

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:23	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:23	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:23	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 04:23	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:23	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:23	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
Isopropylbenzene	**10**		1.0	1.0	0.35	ug/L		11/02/18 04:23	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 04:23	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:23	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:23	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:23	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:23	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 04:23	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:23	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:23	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:23	1
Tetrachloroethene	1.0	U M	1.0	1.0	0.74	ug/L		11/02/18 04:23	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:23	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:23	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:23	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 04:23	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:23	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 04:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*81 - 118*		*11/02/18 04:23*	*1*
4-Bromofluorobenzene (Surr)	*91*		*85 - 114*		*11/02/18 04:23*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 04:23*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 04:23*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/30/18 21:49	1
Manganese	**1.3**	**J**	10	3.0	1.0	ug/L		10/30/18 21:49	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 19:01	1

Client Sample ID: G6M-02-07X_FAL18

Date Collected: 10/23/18 09:40
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-17

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:47	1

Client Sample ID: G6M-02-07X_FAL18
Date Collected: 10/23/18 09:40
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-17
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 04:47	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:47	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:47	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 04:47	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 04:47	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 04:47	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:47	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 04:47	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:47	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 04:47	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 04:47	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 04:47	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 04:47	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:47	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 04:47	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 04:47	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:47	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 04:47	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:47	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 04:47	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:47	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:47	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 04:47	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 04:47	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:47	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:47	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 04:47	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 04:47	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:47	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 04:47	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:47	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 04:47	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:47	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 04:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 04:47	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:47	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:47	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 04:47	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 04:47	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 04:47	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
Isopropylbenzene	**6.0**		1.0	1.0	0.35	ug/L		11/02/18 04:47	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 04:47	1

Client Sample ID: G6M-02-07X_FAL18

Lab Sample ID: 680-159735-17

Date Collected: 10/23/18 09:40

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 04:47	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 04:47	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 04:47	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 04:47	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 04:47	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:47	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 04:47	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 04:47	1
Tetrachloroethene	**3.4**		1.0	1.0	0.74	ug/L		11/02/18 04:47	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 04:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:47	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 04:47	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 04:47	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 04:47	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 04:47	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 04:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*81 - 118*		*11/02/18 04:47*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/02/18 04:47*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 04:47*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/02/18 04:47*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/30/18 21:54	1
Manganese	**9.4**	**J**	10	3.0	1.0	ug/L		10/30/18 21:54	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 19:05	1

Client Sample ID: XSA-12-98X_FAL18

Lab Sample ID: 680-159735-18

Date Collected: 10/23/18 11:35

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:32	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 11:32	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:32	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:32	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 11:32	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:32	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 11:32	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: XSA-12-98X_FAL18
Date Collected: 10/23/18 11:35
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-18
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:32	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 11:32	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:32	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 11:32	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 11:32	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 11:32	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 11:32	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:32	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:32	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 11:32	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:32	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 11:32	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:32	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 11:32	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:32	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 11:32	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 11:32	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 11:32	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:32	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:32	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 11:32	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:32	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 11:32	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:32	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 11:32	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:32	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 11:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:32	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:32	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:32	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		11/02/18 11:32	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:32	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:32	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:32	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 11:32	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:32	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:32	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:32	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:32	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 11:32	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:32	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:32	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:32	1

Client Sample ID: XSA-12-98X_FAL18

Lab Sample ID: 680-159735-18
Date Collected: 10/23/18 11:35
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	**2.8**		1.0	1.0	0.74	ug/L		11/02/18 11:32	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:32	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:32	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:32	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 11:32	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:32	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 11:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/02/18 11:32*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 11:32*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/02/18 11:32*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/02/18 11:32*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**44**	**J**	50	50	17	ug/L		10/30/18 21:44	1
Manganese	**6.2**	**J**	10	3.0	1.0	ug/L		10/30/18 21:44	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 18:57	1

Client Sample ID: G6M-02-06X_FAL18

Lab Sample ID: 680-159735-19
Date Collected: 10/22/18 13:55
Matrix: Water
Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:54	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 11:54	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:54	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:54	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 11:54	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:54	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 11:54	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:54	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 11:54	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:54	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 11:54	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 11:54	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 11:54	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 11:54	1
1,3-Dichlorobenzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 11:54	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 11:54	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-02-06X_FAL18
Date Collected: 10/22/18 13:55
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-19
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,4-Dichlorobenzene	1.0	U M	1.0	1.0	0.46	ug/L		11/02/18 11:54	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:54	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 11:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:54	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 11:54	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:54	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:54	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 11:54	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 11:54	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 11:54	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:54	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 11:54	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 11:54	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 11:54	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:54	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 11:54	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:54	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 11:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 11:54	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:54	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:54	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 11:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 11:54	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 11:54	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:54	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 11:54	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 11:54	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 11:54	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 11:54	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 11:54	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 11:54	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:54	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 11:54	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 11:54	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 11:54	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 11:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:54	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 11:54	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 11:54	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 11:54	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 11:54	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 11:54	1

Client Sample ID: G6M-02-06X_FAL18

Lab Sample ID: 680-159735-19

Date Collected: 10/22/18 13:55

Matrix: Water

Date Received: 10/25/18 09:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/02/18 11:54*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*11/02/18 11:54*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/02/18 11:54*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/02/18 11:54*	*1*

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	**49**	**J**	50	50	17	ug/L		10/30/18 22:16	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/30/18 22:16	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 19:20	1

Client Sample ID: G6M-02-13X_FAL18

Lab Sample ID: 680-159735-20

Date Collected: 10/24/18 12:10

Matrix: Water

Date Received: 10/25/18 09:20

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:16	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 12:16	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:16	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:16	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 12:16	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:16	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 12:16	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:16	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 12:16	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:16	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 12:16	1
1,2-Dichloroethene, Total	**2.1**		2.0	1.0	0.74	ug/L		11/02/18 12:16	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 12:16	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 12:16	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 12:16	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 12:16	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 12:16	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:16	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 12:16	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:16	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 12:16	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:16	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:16	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 12:16	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 12:16	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 12:16	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:16	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 12:16	1

Client Sample ID: G6M-02-13X_FAL18
Date Collected: 10/24/18 12:10
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-20
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 12:16	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:16	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 12:16	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:16	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 12:16	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 12:16	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:16	1
cis-1,2-Dichloroethene	**1.8**		1.0	1.0	0.41	ug/L		11/02/18 12:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 12:16	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:16	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:16	1
Dichlorodifluoromethane	1.0	U M	1.0	1.0	0.60	ug/L		11/02/18 12:16	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 12:16	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 12:16	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:16	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 12:16	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 12:16	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 12:16	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 12:16	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 12:16	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 12:16	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:16	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 12:16	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 12:16	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 12:16	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 12:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:16	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 12:16	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 12:16	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 12:16	1
Vinyl chloride	**1.6**		1.0	1.0	0.50	ug/L		11/02/18 12:16	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 12:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/02/18 12:16*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/02/18 12:16*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/02/18 12:16*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/02/18 12:16*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	**1.8**		1.1	1.1	0.55	ug/L		11/04/18 14:45	1
Ethylene	**2.8**		1.0	1.0	0.50	ug/L		11/04/18 14:45	1
Methane (TCD)	**5900**		390	77	39	ug/L		11/04/18 14:45	1

Client Sample Results

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-02-13X_FAL18
Date Collected: 10/24/18 12:10
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-20
Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	11000		50	50	17	ug/L		10/30/18 21:12	1
Manganese	18000		10	3.0	1.0	ug/L		10/30/18 21:12	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	150		3.0	3.0	1.5	ug/L		10/26/18 18:34	1

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159735-1	G6M-13-02X_FAL18	80 Q	99	90	98
680-159735-1 MS	G6M-13-02X_FAL18	81	94	95	104
680-159735-1 MSD	G6M-13-02X_FAL18	83	95	95	105
680-159735-4	G6M-04-22X_FAL18	81	100	91	96
680-159735-5	G6M-04-31X_FAL18	89	91	100	102
680-159735-6	G6M_TB04	88	94	99	102
680-159735-7	AOC50-DUP01_FAL18	88	95	99	102
680-159735-8	G6M-04-07X_FAL18	103	92	112	94
680-159735-9	G6M-04-06X_FAL18	95	99	100	100
680-159735-10	XSA-12-95X_FAL18	92	101	99	98
680-159735-11	G6M-03-10X_FAL18	82	100	92	94
680-159735-12	G6M-04-05X_FAL18	89	93	97	102
680-159735-13	G6M-02-12X_FAL18	89	91	99	100
680-159735-14	G6M-EB02_FAL18	87	93	99	102
680-159735-15	G6M-02-11X_FAL18	88	93	98	102
680-159735-16	G6M-04-11X_FAL18	89	91	99	102
680-159735-17	G6M-02-07X_FAL18	90	92	99	102
680-159735-18	XSA-12-98X_FAL18	93	101	98	97
680-159735-19	G6M-02-06X_FAL18	93	103	98	98
680-159735-20	G6M-02-13X_FAL18	93	99	97	97
LCS 680-545776/4	Lab Control Sample	88	97	96	102
LCS 680-545781/4	Lab Control Sample	87	102	94	97
LCS 680-545917/7	Lab Control Sample	86	96	98	103
LCS 680-545948/4	Lab Control Sample	86	92	97	99
LCS 680-545954/4	Lab Control Sample	85	100	94	95
LCSD 680-545776/5	Lab Control Sample Dup	86	95	95	101
LCSD 680-545781/5	Lab Control Sample Dup	84	102	94	98
LCSD 680-545917/8	Lab Control Sample Dup	88	96	98	103
LCSD 680-545948/5	Lab Control Sample Dup	94	96	103	103
LCSD 680-545954/5	Lab Control Sample Dup	84	99	94	95
MB 680-545776/9	Method Blank	87	93	97	101
MB 680-545781/9	Method Blank	82	100	90	96
MB 680-545917/12	Method Blank	88	90	98	101
MB 680-545948/9	Method Blank	92	101	99	98
MB 680-545954/9	Method Blank	82	101	91	95

Surrogate Legend

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

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

Lab Sample ID: MB 680-545776/9
Matrix: Water
Analysis Batch: 545776

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 12:10	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 12:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 12:10	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 12:10	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 12:10	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 12:10	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 12:10	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 12:10	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 12:10	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 12:10	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 12:10	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 12:10	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 12:10	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 12:10	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 12:10	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 12:10	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 12:10	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 12:10	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 12:10	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 12:10	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 12:10	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 12:10	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 12:10	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 12:10	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 12:10	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 12:10	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 12:10	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 12:10	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 12:10	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 12:10	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 12:10	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 12:10	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 12:10	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 12:10	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 12:10	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 12:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 12:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 12:10	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 12:10	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 12:10	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 12:10	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 12:10	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 12:10	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1

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

Lab Sample ID: MB 680-545776/9
Matrix: Water
Analysis Batch: 545776

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 12:10	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 12:10	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 12:10	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 12:10	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 12:10	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 12:10	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 12:10	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 12:10	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 12:10	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 12:10	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 12:10	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 12:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 12:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 12:10	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 12:10	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 12:10	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 12:10	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 12:10	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 12:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*		*11/01/18 12:10*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/01/18 12:10*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 119*		*11/01/18 12:10*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/01/18 12:10*	*1*

Lab Sample ID: LCS 680-545776/4
Matrix: Water
Analysis Batch: 545776

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/L		105	78 - 124
1,1,1-Trichloroethane	50.0	45.3		ug/L		91	74 - 131
1,1,2,2-Tetrachloroethane	50.0	56.4		ug/L		113	71 - 121
1,1,2-Trichloroethane	50.0	49.6		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	47.5		ug/L		95	77 - 125
1,1-Dichloroethene	50.0	42.3		ug/L		85	71 - 131
1,1-Dichloropropene	50.0	49.9		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	50.5		ug/L		101	69 - 129
1,2,3-Trichloropropane	50.0	52.7		ug/L		105	73 - 122
1,2,4-Trichlorobenzene	50.0	50.5		ug/L		101	69 - 130
1,2,4-Trimethylbenzene	50.0	50.0		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	52.3		ug/L		105	62 - 128
1,2-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,2-Dichloroethane	50.0	45.6		ug/L		91	73 - 128
1,2-Dichloroethene, Total	100	93.2		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	48.7		ug/L		97	78 - 122

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

Lab Sample ID: LCS 680-545776/4
Matrix: Water
Analysis Batch: 545776

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	50.5		ug/L		101	75 - 124
1,3-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	51.2		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118
2,2-Dichloropropane	50.0	48.2		ug/L		96	60 - 139
2-Butanone (MEK)	250	253		ug/L		101	56 - 143
2-Chlorotoluene	50.0	51.4		ug/L		103	79 - 122
2-Hexanone	250	262		ug/L		105	57 - 139
4-Chlorotoluene	50.0	50.6		ug/L		101	78 - 122
4-Isopropyltoluene	50.0	52.4		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	267		ug/L		107	67 - 130
Acetone	250	257		ug/L		103	39 - 160
Benzene	50.0	48.8		ug/L		98	79 - 120
Bromobenzene	50.0	49.4		ug/L		99	80 - 120
Bromoform	50.0	43.3		ug/L		87	66 - 130
Bromomethane	50.0	36.7		ug/L		73	53 - 141
Carbon disulfide	50.0	46.5		ug/L		93	64 - 133
Carbon tetrachloride	50.0	46.2		ug/L		92	72 - 136
Chlorobenzene	50.0	51.0		ug/L		102	82 - 118
Chlorobromomethane	50.0	46.9		ug/L		94	78 - 123
Chlorodibromomethane	50.0	47.4		ug/L		95	74 - 126
Chloroethane	50.0	40.3		ug/L		81	60 - 138
Chloroform	50.0	47.6		ug/L		95	79 - 124
Chloromethane	50.0	45.3	M	ug/L		91	50 - 139
cis-1,2-Dichloroethene	50.0	45.7		ug/L		91	78 - 123
cis-1,3-Dichloropropene	50.0	48.2		ug/L		96	75 - 124
Dibromomethane	50.0	50.2		ug/L		100	79 - 123
Dichlorobromomethane	50.0	46.3		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	42.4		ug/L		85	32 - 152
Ethylbenzene	50.0	51.4		ug/L		103	79 - 121
Ethylene Dibromide	50.0	51.9		ug/L		104	75 - 127
Hexachlorobutadiene	50.0	49.1		ug/L		98	66 - 134
Isopropylbenzene	50.0	50.8		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	47.3		ug/L		95	71 - 124
Methylene Chloride	50.0	49.2		ug/L		98	74 - 124
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Naphthalene	50.0	54.9		ug/L		110	61 - 128
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128
N-Propylbenzene	50.0	50.9		ug/L		102	76 - 126
o-Xylene	50.0	50.2		ug/L		100	78 - 122
sec-Butylbenzene	50.0	50.5		ug/L		101	77 - 126
Styrene	50.0	52.8		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.7		ug/L		101	78 - 124
Tetrachloroethene	50.0	50.4		ug/L		101	74 - 129
Toluene	50.0	49.2		ug/L		98	80 - 121
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.4		ug/L		99	73 - 127
Trichloroethene	50.0	50.3		ug/L		101	79 - 123

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

Lab Sample ID: LCS 680-545776/4
Matrix: Water
Analysis Batch: 545776

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	42.6		ug/L		85	65 - 141
Vinyl acetate	100	117		ug/L		117	54 - 146
Vinyl chloride	50.0	44.8		ug/L		90	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 680-545776/5
Matrix: Water
Analysis Batch: 545776

Client Sample 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	52.3		ug/L		105	78 - 124	0	20
1,1,1-Trichloroethane	50.0	46.0		ug/L		92	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	54.8		ug/L		110	71 - 121	3	20
1,1,2-Trichloroethane	50.0	48.9		ug/L		98	80 - 119	1	20
1,1-Dichloroethane	50.0	47.2		ug/L		94	77 - 125	1	20
1,1-Dichloroethene	50.0	43.0		ug/L		86	71 - 131	2	20
1,1-Dichloropropene	50.0	49.9		ug/L		100	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	48.1		ug/L		96	69 - 129	5	20
1,2,3-Trichloropropane	50.0	52.5		ug/L		105	73 - 122	0	20
1,2,4-Trichlorobenzene	50.0	49.3		ug/L		99	69 - 130	2	20
1,2,4-Trimethylbenzene	50.0	49.3		ug/L		99	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	50.4		ug/L		101	62 - 128	4	20
1,2-Dichlorobenzene	50.0	48.8		ug/L		98	80 - 119	3	20
1,2-Dichloroethane	50.0	44.5		ug/L		89	73 - 128	2	20
1,2-Dichloroethene, Total	100	94.9		ug/L		95	79 - 121	2	20
1,2-Dichloropropane	50.0	47.6		ug/L		95	78 - 122	2	20
1,3,5-Trimethylbenzene	50.0	50.0		ug/L		100	75 - 124	1	20
1,3-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119	2	20
1,3-Dichloropropane	50.0	50.7		ug/L		101	80 - 119	1	20
1,4-Dichlorobenzene	50.0	49.2		ug/L		98	79 - 118	2	20
2,2-Dichloropropane	50.0	48.4		ug/L		97	60 - 139	1	20
2-Butanone (MEK)	250	250		ug/L		100	56 - 143	1	20
2-Chlorotoluene	50.0	50.2		ug/L		100	79 - 122	2	20
2-Hexanone	250	256		ug/L		103	57 - 139	2	20
4-Chlorotoluene	50.0	50.4		ug/L		101	78 - 122	0	20
4-Isopropyltoluene	50.0	51.8		ug/L		104	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	250	259		ug/L		104	67 - 130	3	20
Acetone	250	240		ug/L		96	39 - 160	7	20
Benzene	50.0	48.6		ug/L		97	79 - 120	0	20
Bromobenzene	50.0	49.1		ug/L		98	80 - 120	1	20
Bromoform	50.0	42.5		ug/L		85	66 - 130	2	20
Bromomethane	50.0	38.1		ug/L		76	53 - 141	4	20

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

Lab Sample ID: LCSD 680-545776/5
Matrix: Water
Analysis Batch: 545776

Client Sample 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 disulfide			50.0	46.4		ug/L		93	64 - 133	0	20
Carbon tetrachloride			50.0	46.9		ug/L		94	72 - 136	2	20
Chlorobenzene			50.0	50.4		ug/L		101	82 - 118	1	20
Chlorobromomethane			50.0	46.4		ug/L		93	78 - 123	1	20
Chlorodibromomethane			50.0	47.2		ug/L		94	74 - 126	0	20
Chloroethane			50.0	38.8		ug/L		78	60 - 138	4	20
Chloroform			50.0	46.9		ug/L		94	79 - 124	1	20
Chloromethane			50.0	45.5	M	ug/L		91	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	45.8		ug/L		92	78 - 123	0	20
cis-1,3-Dichloropropene			50.0	47.3		ug/L		95	75 - 124	2	20
Dibromomethane			50.0	48.1		ug/L		96	79 - 123	4	20
Dichlorobromomethane			50.0	45.1		ug/L		90	79 - 125	3	20
Dichlorodifluoromethane			50.0	45.0		ug/L		90	32 - 152	6	20
Ethylbenzene			50.0	50.8		ug/L		102	79 - 121	1	20
Ethylene Dibromide			50.0	51.9		ug/L		104	75 - 127	0	20
Hexachlorobutadiene			50.0	49.7		ug/L		99	66 - 134	1	20
Isopropylbenzene			50.0	50.9		ug/L		102	72 - 131	0	20
Methyl tert-butyl ether			50.0	48.7		ug/L		97	71 - 124	3	20
Methylene Chloride			50.0	47.5		ug/L		95	74 - 124	4	20
m-Xylene & p-Xylene			50.0	50.2		ug/L		100	80 - 121	1	20
Naphthalene			50.0	53.8		ug/L		108	61 - 128	2	20
n-Butylbenzene			50.0	52.6		ug/L		105	75 - 128	1	20
N-Propylbenzene			50.0	50.7		ug/L		101	76 - 126	1	20
o-Xylene			50.0	49.0		ug/L		98	78 - 122	2	20
sec-Butylbenzene			50.0	50.5		ug/L		101	77 - 126	0	20
Styrene			50.0	51.2		ug/L		102	78 - 123	3	20
tert-Butylbenzene			50.0	50.3		ug/L		101	78 - 124	1	20
Tetrachloroethene			50.0	50.9		ug/L		102	74 - 129	1	20
Toluene			50.0	49.3		ug/L		99	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	49.1		ug/L		98	75 - 124	3	20
trans-1,3-Dichloropropene			50.0	48.7		ug/L		97	73 - 127	1	20
Trichloroethene			50.0	50.2		ug/L		100	79 - 123	0	20
Trichlorofluoromethane			50.0	44.3		ug/L		89	65 - 141	4	20
Vinyl acetate			100	114		ug/L		114	54 - 146	3	20
Vinyl chloride			50.0	46.1		ug/L		92	58 - 137	3	20
Xylenes, Total			100	99.2		ug/L		99	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
Toluene-d8 (Surr)	*101*		*89 - 112*

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

Lab Sample ID: MB 680-545781/9
Matrix: Water
Analysis Batch: 545781

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/01/18 10:08	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 10:08	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/01/18 10:08	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 10:08	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/01/18 10:08	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 10:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/01/18 10:08	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/01/18 10:08	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/01/18 10:08	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/01/18 10:08	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/01/18 10:08	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/01/18 10:08	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/01/18 10:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 10:08	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/01/18 10:08	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/01/18 10:08	1
Acetone	10	U	10	10	7.0	ug/L		11/01/18 10:08	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/01/18 10:08	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/01/18 10:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/01/18 10:08	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/01/18 10:08	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 10:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/01/18 10:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/01/18 10:08	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 10:08	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/01/18 10:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/01/18 10:08	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/01/18 10:08	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1

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

Lab Sample ID: MB 680-545781/9
Matrix: Water
Analysis Batch: 545781

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/01/18 10:08	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/01/18 10:08	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/01/18 10:08	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/01/18 10:08	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/01/18 10:08	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/01/18 10:08	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/01/18 10:08	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/01/18 10:08	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/01/18 10:08	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/01/18 10:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/01/18 10:08	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/01/18 10:08	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/01/18 10:08	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/01/18 10:08	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/01/18 10:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/01/18 10:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/01/18 10:08*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/01/18 10:08*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/01/18 10:08*	*1*

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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	47.1		ug/L		94	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.5		ug/L		107	71 - 121
1,1,2-Trichloroethane	50.0	54.1		ug/L		108	80 - 119
1,1-Dichloroethane	50.0	52.3		ug/L		105	77 - 125
1,1-Dichloroethene	50.0	50.4		ug/L		101	71 - 131
1,1-Dichloropropene	50.0	50.9		ug/L		102	79 - 125
1,2,3-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 129
1,2,3-Trichloropropane	50.0	51.9		ug/L		104	73 - 122
1,2,4-Trichlorobenzene	50.0	54.7		ug/L		109	69 - 130
1,2,4-Trimethylbenzene	50.0	51.0		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	52.5		ug/L		105	62 - 128
1,2-Dichlorobenzene	50.0	51.5		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	47.9		ug/L		96	73 - 128
1,2-Dichloroethene, Total	100	103		ug/L		103	79 - 121
1,2-Dichloropropane	50.0	56.8		ug/L		114	78 - 122

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

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	75 - 124
1,3-Dichlorobenzene	50.0	51.4		ug/L		103	80 - 119
1,3-Dichloropropane	50.0	52.9		ug/L		106	80 - 119
1,4-Dichlorobenzene	50.0	51.1		ug/L		102	79 - 118
2,2-Dichloropropane	50.0	55.9		ug/L		112	60 - 139
2-Butanone (MEK)	250	271		ug/L		109	56 - 143
2-Chlorotoluene	50.0	51.7		ug/L		103	79 - 122
2-Hexanone	250	273		ug/L		109	57 - 139
4-Chlorotoluene	50.0	52.1		ug/L		104	78 - 122
4-Isopropyltoluene	50.0	52.7		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	277		ug/L		111	67 - 130
Acetone	250	274		ug/L		110	39 - 160
Benzene	50.0	51.9		ug/L		104	79 - 120
Bromobenzene	50.0	51.0		ug/L		102	80 - 120
Bromoform	50.0	54.6		ug/L		109	66 - 130
Bromomethane	50.0	44.5		ug/L		89	53 - 141
Carbon disulfide	50.0	49.9		ug/L		100	64 - 133
Carbon tetrachloride	50.0	47.2		ug/L		94	72 - 136
Chlorobenzene	50.0	49.2		ug/L		98	82 - 118
Chlorobromomethane	50.0	47.1		ug/L		94	78 - 123
Chlorodibromomethane	50.0	49.4		ug/L		99	74 - 126
Chloroethane	50.0	48.2		ug/L		96	60 - 138
Chloroform	50.0	48.9		ug/L		98	79 - 124
Chloromethane	50.0	51.9		ug/L		104	50 - 139
cis-1,2-Dichloroethene	50.0	52.5		ug/L		105	78 - 123
cis-1,3-Dichloropropene	50.0	56.2		ug/L		112	75 - 124
Dibromomethane	50.0	50.1		ug/L		100	79 - 123
Dichlorobromomethane	50.0	50.5		ug/L		101	79 - 125
Dichlorodifluoromethane	50.0	45.9		ug/L		92	32 - 152
Ethylbenzene	50.0	51.3		ug/L		103	79 - 121
Ethylene Dibromide	50.0	51.7		ug/L		103	75 - 127
Hexachlorobutadiene	50.0	54.0		ug/L		108	66 - 134
Isopropylbenzene	50.0	51.5		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	50.5		ug/L		101	71 - 124
Methylene Chloride	50.0	52.0		ug/L		104	74 - 124
m-Xylene & p-Xylene	50.0	51.5		ug/L		103	80 - 121
Naphthalene	50.0	54.3		ug/L		109	61 - 128
n-Butylbenzene	50.0	53.1		ug/L		106	75 - 128
N-Propylbenzene	50.0	52.1		ug/L		104	76 - 126
o-Xylene	50.0	51.4		ug/L		103	78 - 122
sec-Butylbenzene	50.0	51.3		ug/L		103	77 - 126
Styrene	50.0	53.9		ug/L		108	78 - 123
tert-Butylbenzene	50.0	51.0		ug/L		102	78 - 124
Tetrachloroethene	50.0	51.2		ug/L		102	74 - 129
Toluene	50.0	52.8		ug/L		106	80 - 121
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	75 - 124
trans-1,3-Dichloropropene	50.0	55.2		ug/L		110	73 - 127
Trichloroethene	50.0	48.1		ug/L		96	79 - 123

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

Lab Sample ID: LCS 680-545781/4
Matrix: Water
Analysis Batch: 545781

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			50.0	45.3		ug/L		91	65 - 141		
Vinyl acetate			100	137		ug/L		137	54 - 146		
Vinyl chloride			50.0	54.5		ug/L		109	58 - 137		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: LCSD 680-545781/5
Matrix: Water
Analysis Batch: 545781

Client Sample 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	1	20
1,1,1-Trichloroethane			50.0	47.7		ug/L		95	74 - 131	1	20
1,1,2,2-Tetrachloroethane			50.0	52.4		ug/L		105	71 - 121	2	20
1,1,2-Trichloroethane			50.0	51.1		ug/L		102	80 - 119	6	20
1,1-Dichloroethane			50.0	52.1		ug/L		104	77 - 125	0	20
1,1-Dichloroethene			50.0	50.6		ug/L		101	71 - 131	0	20
1,1-Dichloropropene			50.0	51.3		ug/L		103	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	55.1		ug/L		110	69 - 129	3	20
1,2,3-Trichloropropane			50.0	50.4		ug/L		101	73 - 122	3	20
1,2,4-Trichlorobenzene			50.0	55.6		ug/L		111	69 - 130	2	20
1,2,4-Trimethylbenzene			50.0	52.3		ug/L		105	76 - 124	3	20
1,2-Dibromo-3-Chloropropane			50.0	52.3		ug/L		105	62 - 128	0	20
1,2-Dichlorobenzene			50.0	51.7		ug/L		103	80 - 119	0	20
1,2-Dichloroethane			50.0	46.0		ug/L		92	73 - 128	4	20
1,2-Dichloroethene, Total			100	104		ug/L		104	79 - 121	0	20
1,2-Dichloropropane			50.0	55.4		ug/L		111	78 - 122	2	20
1,3,5-Trimethylbenzene			50.0	52.7		ug/L		105	75 - 124	1	20
1,3-Dichlorobenzene			50.0	52.1		ug/L		104	80 - 119	1	20
1,3-Dichloropropane			50.0	50.8		ug/L		102	80 - 119	4	20
1,4-Dichlorobenzene			50.0	51.3		ug/L		103	79 - 118	0	20
2,2-Dichloropropane			50.0	55.1		ug/L		110	60 - 139	1	20
2-Butanone (MEK)			250	253		ug/L		101	56 - 143	7	20
2-Chlorotoluene			50.0	51.9		ug/L		104	79 - 122	0	20
2-Hexanone			250	260		ug/L		104	57 - 139	5	20
4-Chlorotoluene			50.0	52.1		ug/L		104	78 - 122	0	20
4-Isopropyltoluene			50.0	54.4		ug/L		109	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	260		ug/L		104	67 - 130	6	20
Acetone			250	257		ug/L		103	39 - 160	6	20
Benzene			50.0	50.8		ug/L		102	79 - 120	2	20
Bromobenzene			50.0	50.3		ug/L		101	80 - 120	1	20
Bromoform			50.0	52.7		ug/L		105	66 - 130	4	20
Bromomethane			50.0	42.3		ug/L		85	53 - 141	5	20

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

Lab Sample ID: LCSD 680-545781/5
Matrix: Water
Analysis Batch: 545781

Client Sample 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 disulfide			50.0	50.2		ug/L		100	64 - 133	1	20
Carbon tetrachloride			50.0	47.6		ug/L		95	72 - 136	1	20
Chlorobenzene			50.0	49.2		ug/L		98	82 - 118	0	20
Chlorobromomethane			50.0	46.2		ug/L		92	78 - 123	2	20
Chlorodibromomethane			50.0	46.7		ug/L		93	74 - 126	6	20
Chloroethane			50.0	48.5		ug/L		97	60 - 138	1	20
Chloroform			50.0	48.6		ug/L		97	79 - 124	1	20
Chloromethane			50.0	51.9		ug/L		104	50 - 139	0	20
cis-1,2-Dichloroethene			50.0	52.6		ug/L		105	78 - 123	0	20
cis-1,3-Dichloropropene			50.0	54.2		ug/L		108	75 - 124	4	20
Dibromomethane			50.0	48.1		ug/L		96	79 - 123	4	20
Dichlorobromomethane			50.0	49.2		ug/L		98	79 - 125	2	20
Dichlorodifluoromethane			50.0	45.6		ug/L		91	32 - 152	1	20
Ethylbenzene			50.0	51.7		ug/L		103	79 - 121	1	20
Ethylene Dibromide			50.0	49.1		ug/L		98	75 - 127	5	20
Hexachlorobutadiene			50.0	55.6		ug/L		111	66 - 134	3	20
Isopropylbenzene			50.0	51.9		ug/L		104	72 - 131	1	20
Methyl tert-butyl ether			50.0	48.7		ug/L		97	71 - 124	4	20
Methylene Chloride			50.0	50.8		ug/L		102	74 - 124	2	20
m-Xylene & p-Xylene			50.0	52.1		ug/L		104	80 - 121	1	20
Naphthalene			50.0	55.2		ug/L		110	61 - 128	2	20
n-Butylbenzene			50.0	55.3		ug/L		111	75 - 128	4	20
N-Propylbenzene			50.0	53.1		ug/L		106	76 - 126	2	20
o-Xylene			50.0	51.9		ug/L		104	78 - 122	1	20
sec-Butylbenzene			50.0	52.3		ug/L		105	77 - 126	2	20
Styrene			50.0	53.3		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	53.1		ug/L		106	78 - 124	4	20
Tetrachloroethene			50.0	51.1		ug/L		102	74 - 129	0	20
Toluene			50.0	52.2		ug/L		104	80 - 121	1	20
trans-1,2-Dichloroethene			50.0	51.0		ug/L		102	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	53.2		ug/L		106	73 - 127	4	20
Trichloroethene			50.0	48.7		ug/L		97	79 - 123	1	20
Trichlorofluoromethane			50.0	45.7		ug/L		91	65 - 141	1	20
Vinyl acetate			100	132		ug/L		132	54 - 146	3	20
Vinyl chloride			50.0	54.4		ug/L		109	58 - 137	0	20
Xylenes, Total			100	104		ug/L		104	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

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

Lab Sample ID: MB 680-545917/12
Matrix: Water
Analysis Batch: 545917

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 01:18	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 01:18	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 01:18	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 01:18	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 01:18	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 01:18	1
1,1-Dichloropropene	1.0	U M	1.0	1.0	0.34	ug/L		11/02/18 01:18	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 01:18	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 01:18	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 01:18	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 01:18	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 01:18	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 01:18	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 01:18	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 01:18	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 01:18	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 01:18	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 01:18	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 01:18	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 01:18	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 01:18	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 01:18	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 01:18	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 01:18	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 01:18	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 01:18	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 01:18	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 01:18	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 01:18	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 01:18	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 01:18	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 01:18	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 01:18	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 01:18	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 01:18	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 01:18	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 01:18	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 01:18	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 01:18	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 01:18	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 01:18	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 01:18	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 01:18	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1

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

Lab Sample ID: MB 680-545917/12
Matrix: Water
Analysis Batch: 545917

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 01:18	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 01:18	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 01:18	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 01:18	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 01:18	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 01:18	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 01:18	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 01:18	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 01:18	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 01:18	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 01:18	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 01:18	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 01:18	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 01:18	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 01:18	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 01:18	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 01:18	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 01:18	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 01:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*		*11/02/18 01:18*	*1*
4-Bromofluorobenzene (Surr)	*90*		*85 - 114*		*11/02/18 01:18*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/02/18 01:18*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/02/18 01:18*	*1*

Lab Sample ID: LCS 680-545917/7
Matrix: Water
Analysis Batch: 545917

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	54.4		ug/L		109	78 - 124
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	55.2		ug/L		110	71 - 121
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	48.5		ug/L		97	77 - 125
1,1-Dichloroethene	50.0	44.5		ug/L		89	71 - 131
1,1-Dichloropropene	50.0	52.0	M	ug/L		104	79 - 125
1,2,3-Trichlorobenzene	50.0	50.5		ug/L		101	69 - 129
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	73 - 122
1,2,4-Trichlorobenzene	50.0	50.9		ug/L		102	69 - 130
1,2,4-Trimethylbenzene	50.0	50.9		ug/L		102	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	54.2		ug/L		108	62 - 128
1,2-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119
1,2-Dichloroethane	50.0	45.7		ug/L		91	73 - 128
1,2-Dichloroethene, Total	100	92.8		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	49.2		ug/L		98	78 - 122

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

Lab Sample ID: LCS 680-545917/7
Matrix: Water
Analysis Batch: 545917

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trimethylbenzene	50.0	52.1		ug/L		104	75 - 124
1,3-Dichlorobenzene	50.0	53.5		ug/L		107	80 - 119
1,3-Dichloropropane	50.0	51.2		ug/L		102	80 - 119
1,4-Dichlorobenzene	50.0	51.2		ug/L		102	79 - 118
2,2-Dichloropropane	50.0	43.8		ug/L		88	60 - 139
2-Butanone (MEK)	250	247	M	ug/L		99	56 - 143
2-Chlorotoluene	50.0	52.6		ug/L		105	79 - 122
2-Hexanone	250	251		ug/L		100	57 - 139
4-Chlorotoluene	50.0	51.3		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	53.7		ug/L		107	77 - 127
4-Methyl-2-pentanone (MIBK)	250	257		ug/L		103	67 - 130
Acetone	250	238		ug/L		95	39 - 160
Benzene	50.0	49.5		ug/L		99	79 - 120
Bromobenzene	50.0	49.7		ug/L		99	80 - 120
Bromoform	50.0	44.2		ug/L		88	66 - 130
Bromomethane	50.0	41.9		ug/L		84	53 - 141
Carbon disulfide	50.0	47.2		ug/L		94	64 - 133
Carbon tetrachloride	50.0	48.8		ug/L		98	72 - 136
Chlorobenzene	50.0	52.2		ug/L		104	82 - 118
Chlorobromomethane	50.0	48.1		ug/L		96	78 - 123
Chlorodibromomethane	50.0	48.8		ug/L		98	74 - 126
Chloroethane	50.0	42.6		ug/L		85	60 - 138
Chloroform	50.0	47.5		ug/L		95	79 - 124
Chloromethane	50.0	47.0	M	ug/L		94	50 - 139
cis-1,2-Dichloroethene	50.0	45.4		ug/L		91	78 - 123
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	75 - 124
Dibromomethane	50.0	50.1		ug/L		100	79 - 123
Dichlorobromomethane	50.0	46.3		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	46.2		ug/L		92	32 - 152
Ethylbenzene	50.0	52.5		ug/L		105	79 - 121
Ethylene Dibromide	50.0	52.0		ug/L		104	75 - 127
Hexachlorobutadiene	50.0	50.8		ug/L		102	66 - 134
Isopropylbenzene	50.0	52.2		ug/L		104	72 - 131
Methyl tert-butyl ether	50.0	48.8		ug/L		98	71 - 124
Methylene Chloride	50.0	48.1		ug/L		96	74 - 124
m-Xylene & p-Xylene	50.0	51.7		ug/L		103	80 - 121
Naphthalene	50.0	55.3		ug/L		111	61 - 128
n-Butylbenzene	50.0	52.8		ug/L		106	75 - 128
N-Propylbenzene	50.0	51.8		ug/L		104	76 - 126
o-Xylene	50.0	50.8		ug/L		102	78 - 122
sec-Butylbenzene	50.0	52.1		ug/L		104	77 - 126
Styrene	50.0	53.3		ug/L		107	78 - 123
tert-Butylbenzene	50.0	52.0		ug/L		104	78 - 124
Tetrachloroethene	50.0	52.7		ug/L		105	74 - 129
Toluene	50.0	50.7		ug/L		101	80 - 121
trans-1,2-Dichloroethene	50.0	47.4		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	48.2		ug/L		96	73 - 127
Trichloroethene	50.0	52.1		ug/L		104	79 - 123

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

Lab Sample ID: LCS 680-545917/7
Matrix: Water
Analysis Batch: 545917

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			50.0	46.2		ug/L		92	65 - 141		
Vinyl acetate			100	103		ug/L		103	54 - 146		
Vinyl chloride			50.0	47.0		ug/L		94	58 - 137		
Xylenes, Total			100	103		ug/L		103	79 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Lab Sample ID: LCSD 680-545917/8
Matrix: Water
Analysis Batch: 545917

Client Sample 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	54.6		ug/L		109	78 - 124	0	20
1,1,1-Trichloroethane			50.0	47.4		ug/L		95	74 - 131	0	20
1,1,2,2-Tetrachloroethane			50.0	55.6		ug/L		111	71 - 121	1	20
1,1,2-Trichloroethane			50.0	51.0		ug/L		102	80 - 119	3	20
1,1-Dichloroethane			50.0	48.6		ug/L		97	77 - 125	0	20
1,1-Dichloroethene			50.0	45.1		ug/L		90	71 - 131	1	20
1,1-Dichloropropene			50.0	51.7	M	ug/L		103	79 - 125	1	20
1,2,3-Trichlorobenzene			50.0	50.2		ug/L		100	69 - 129	1	20
1,2,3-Trichloropropane			50.0	53.3		ug/L		107	73 - 122	1	20
1,2,4-Trichlorobenzene			50.0	49.8		ug/L		100	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	52.6		ug/L		105	62 - 128	3	20
1,2-Dichlorobenzene			50.0	50.2		ug/L		100	80 - 119	1	20
1,2-Dichloroethane			50.0	46.4		ug/L		93	73 - 128	1	20
1,2-Dichloroethene, Total			100	93.5		ug/L		93	79 - 121	1	20
1,2-Dichloropropane			50.0	49.7		ug/L		99	78 - 122	1	20
1,3,5-Trimethylbenzene			50.0	51.8		ug/L		104	75 - 124	0	20
1,3-Dichlorobenzene			50.0	52.6		ug/L		105	80 - 119	2	20
1,3-Dichloropropane			50.0	52.2		ug/L		104	80 - 119	2	20
1,4-Dichlorobenzene			50.0	50.5		ug/L		101	79 - 118	1	20
2,2-Dichloropropane			50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)			250	254	M	ug/L		102	56 - 143	3	20
2-Chlorotoluene			50.0	51.6		ug/L		103	79 - 122	2	20
2-Hexanone			250	257		ug/L		103	57 - 139	2	20
4-Chlorotoluene			50.0	51.1		ug/L		102	78 - 122	1	20
4-Isopropyltoluene			50.0	52.1		ug/L		104	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)			250	261		ug/L		105	67 - 130	2	20
Acetone			250	258		ug/L		103	39 - 160	8	20
Benzene			50.0	49.7		ug/L		99	79 - 120	0	20
Bromobenzene			50.0	51.2		ug/L		102	80 - 120	3	20
Bromoform			50.0	45.6		ug/L		91	66 - 130	3	20
Bromomethane			50.0	42.4		ug/L		85	53 - 141	1	20

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

Lab Sample ID: LCSD 680-545917/8
Matrix: Water
Analysis Batch: 545917

Client Sample 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 disulfide			50.0	46.4		ug/L		93	64 - 133	2	20
Carbon tetrachloride			50.0	47.8		ug/L		96	72 - 136	2	20
Chlorobenzene			50.0	52.9		ug/L		106	82 - 118	1	20
Chlorobromomethane			50.0	48.5		ug/L		97	78 - 123	1	20
Chlorodibromomethane			50.0	50.1		ug/L		100	74 - 126	3	20
Chloroethane			50.0	42.0		ug/L		84	60 - 138	1	20
Chloroform			50.0	48.0		ug/L		96	79 - 124	1	20
Chloromethane			50.0	46.7	M	ug/L		93	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.2		ug/L		92	78 - 123	2	20
cis-1,3-Dichloropropene			50.0	47.7		ug/L		95	75 - 124	0	20
Dibromomethane			50.0	51.6		ug/L		103	79 - 123	3	20
Dichlorobromomethane			50.0	47.2		ug/L		94	79 - 125	2	20
Dichlorodifluoromethane			50.0	45.9		ug/L		92	32 - 152	1	20
Ethylbenzene			50.0	52.1		ug/L		104	79 - 121	1	20
Ethylene Dibromide			50.0	53.3		ug/L		107	75 - 127	2	20
Hexachlorobutadiene			50.0	48.6		ug/L		97	66 - 134	4	20
Isopropylbenzene			50.0	52.0		ug/L		104	72 - 131	0	20
Methyl tert-butyl ether			50.0	50.0		ug/L		100	71 - 124	2	20
Methylene Chloride			50.0	49.4		ug/L		99	74 - 124	3	20
m-Xylene & p-Xylene			50.0	51.5		ug/L		103	80 - 121	0	20
Naphthalene			50.0	55.4		ug/L		111	61 - 128	0	20
n-Butylbenzene			50.0	52.1		ug/L		104	75 - 128	1	20
N-Propylbenzene			50.0	51.8		ug/L		104	76 - 126	0	20
o-Xylene			50.0	50.7		ug/L		101	78 - 122	0	20
sec-Butylbenzene			50.0	51.5		ug/L		103	77 - 126	1	20
Styrene			50.0	53.2		ug/L		106	78 - 123	0	20
tert-Butylbenzene			50.0	51.7		ug/L		103	78 - 124	1	20
Tetrachloroethene			50.0	53.3		ug/L		107	74 - 129	1	20
Toluene			50.0	50.8		ug/L		102	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	47.3		ug/L		95	75 - 124	0	20
trans-1,3-Dichloropropene			50.0	49.2		ug/L		98	73 - 127	2	20
Trichloroethene			50.0	51.9		ug/L		104	79 - 123	0	20
Trichlorofluoromethane			50.0	46.1		ug/L		92	65 - 141	0	20
Vinyl acetate			100	106		ug/L		106	54 - 146	3	20
Vinyl chloride			50.0	46.6		ug/L		93	58 - 137	1	20
Xylenes, Total			100	102		ug/L		102	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

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

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 545917

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	1.0	U	50.0	51.4		ug/L		103	78 - 124
1,1,1-Trichloroethane	1.0	U	50.0	48.6		ug/L		97	74 - 131
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.9		ug/L		110	71 - 121
1,1,2-Trichloroethane	0.50	U M	50.0	46.7		ug/L		93	80 - 119
1,1-Dichloroethane	1.0	U	50.0	48.3		ug/L		97	77 - 125
1,1-Dichloroethene	1.0	U	50.0	49.8		ug/L		100	71 - 131
1,1-Dichloropropene	1.0	U	50.0	52.2	M	ug/L		104	79 - 125
1,2,3-Trichlorobenzene	5.0	U	50.0	43.8		ug/L		88	69 - 129
1,2,3-Trichloropropane	1.0	U	50.0	49.9		ug/L		100	73 - 122
1,2,4-Trichlorobenzene	5.0	U	50.0	44.6		ug/L		89	69 - 130
1,2,4-Trimethylbenzene	1.0	U	50.0	47.0		ug/L		94	76 - 124
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	52.1		ug/L		104	62 - 128
1,2-Dichlorobenzene	1.0	U	50.0	49.0		ug/L		98	80 - 119
1,2-Dichloroethane	1.0	U M	50.0	42.3		ug/L		85	73 - 128
1,2-Dichloroethene, Total	25		100	116		ug/L		91	79 - 121
1,2-Dichloropropane	1.0	U	50.0	48.3		ug/L		97	78 - 122
1,3,5-Trimethylbenzene	0.50	U	50.0	48.6		ug/L		97	75 - 124
1,3-Dichlorobenzene	1.0	U	50.0	51.3		ug/L		103	80 - 119
1,3-Dichloropropane	1.0	U	50.0	46.1		ug/L		92	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	49.8		ug/L		100	79 - 118
2,2-Dichloropropane	1.0	U	50.0	31.3		ug/L		63	60 - 139
2-Butanone (MEK)	10	U	250	235	M	ug/L		94	56 - 143
2-Chlorotoluene	0.50	U	50.0	49.8		ug/L		100	79 - 122
2-Hexanone	5.0	U	250	231		ug/L		92	57 - 139
4-Chlorotoluene	1.0	U	50.0	48.4		ug/L		97	78 - 122
4-Isopropyltoluene	1.0	U	50.0	52.6		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U	250	236		ug/L		94	67 - 130
Acetone	86		250	305		ug/L		87	39 - 160
Benzene	1.0	U	50.0	49.1		ug/L		98	79 - 120
Bromobenzene	1.0	U	50.0	47.5		ug/L		95	80 - 120
Bromoform	1.0	U	50.0	41.5		ug/L		83	66 - 130
Bromomethane	5.0	U	50.0	38.2		ug/L		76	53 - 141
Carbon disulfide	2.0	U	50.0	51.0		ug/L		102	64 - 133
Carbon tetrachloride	0.50	U	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	0.50	U	50.0	50.4		ug/L		101	82 - 118
Chlorobromomethane	1.0	U	50.0	45.4		ug/L		91	78 - 123
Chlorodibromomethane	0.50	U	50.0	44.1		ug/L		88	74 - 126
Chloroethane	5.0	U	50.0	44.3		ug/L		89	60 - 138
Chloroform	1.0	U	50.0	47.3		ug/L		95	79 - 124
Chloromethane	1.0	U	50.0	53.6	M	ug/L		107	50 - 139
cis-1,2-Dichloroethene	24		50.0	65.7		ug/L		84	78 - 123
cis-1,3-Dichloropropene	1.0	U	50.0	42.9		ug/L		86	75 - 124
Dibromomethane	1.0	U	50.0	45.7		ug/L		91	79 - 123
Dichlorobromomethane	1.0	U	50.0	42.8		ug/L		86	79 - 125
Dichlorodifluoromethane	1.0	U	50.0	54.0		ug/L		108	32 - 152
Ethylbenzene	0.50	U	50.0	51.2		ug/L		102	79 - 121
Ethylene Dibromide	1.0	U	50.0	47.1		ug/L		94	75 - 127
Hexachlorobutadiene	5.0	U	50.0	54.2		ug/L		108	66 - 134

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

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 545917

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	1.0	U	50.0	51.4		ug/L		103	72 - 131
Methyl tert-butyl ether	0.50	U	50.0	44.6		ug/L		89	71 - 124
Methylene Chloride	5.0	U	50.0	47.5		ug/L		95	74 - 124
m-Xylene & p-Xylene	1.0	U	50.0	50.2		ug/L		100	80 - 121
Naphthalene	5.0	U	50.0	47.8		ug/L		96	61 - 128
n-Butylbenzene	1.0	U	50.0	50.3		ug/L		101	75 - 128
N-Propylbenzene	1.0	U	50.0	49.8		ug/L		100	76 - 126
o-Xylene	0.50	U	50.0	49.6		ug/L		99	78 - 122
sec-Butylbenzene	1.0	U	50.0	49.3		ug/L		99	77 - 126
Styrene	0.50	U	50.0	49.0		ug/L		98	78 - 123
tert-Butylbenzene	1.0	U	50.0	49.3		ug/L		99	78 - 124
Tetrachloroethene	28		50.0	80.6		ug/L		105	74 - 129
Toluene	1.0	U	50.0	48.4		ug/L		97	80 - 121
trans-1,2-Dichloroethene	1.0	M	50.0	50.3		ug/L		99	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	40.5		ug/L		81	73 - 127
Trichloroethene	9.6		50.0	61.0		ug/L		103	79 - 123
Trichlorofluoromethane	1.0	U	50.0	50.7		ug/L		101	65 - 141
Vinyl acetate	2.0	U Q	100	74.8		ug/L		75	54 - 146
Vinyl chloride	3.5		50.0	56.9		ug/L		107	58 - 137
Xylenes, Total	0.50	U	100	99.8		ug/L		100	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 545917

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1.0	U	50.0	52.5		ug/L		105	78 - 124	2	20
1,1,1-Trichloroethane	1.0	U	50.0	48.9		ug/L		98	74 - 131	1	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	55.5		ug/L		111	71 - 121	1	20
1,1,2-Trichloroethane	0.50	U M	50.0	47.9		ug/L		96	80 - 119	3	20
1,1-Dichloroethane	1.0	U	50.0	49.1		ug/L		98	77 - 125	2	20
1,1-Dichloroethene	1.0	U	50.0	50.4		ug/L		101	71 - 131	1	20
1,1-Dichloropropene	1.0	U	50.0	52.7	M	ug/L		105	79 - 125	1	20
1,2,3-Trichlorobenzene	5.0	U	50.0	45.8		ug/L		92	69 - 129	4	20
1,2,3-Trichloropropane	1.0	U	50.0	52.0		ug/L		104	73 - 122	4	20
1,2,4-Trichlorobenzene	5.0	U	50.0	46.7		ug/L		93	69 - 130	5	20
1,2,4-Trimethylbenzene	1.0	U	50.0	47.8		ug/L		96	76 - 124	2	20
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	53.0		ug/L		106	62 - 128	2	20
1,2-Dichlorobenzene	1.0	U	50.0	49.6		ug/L		99	80 - 119	1	20
1,2-Dichloroethane	1.0	U M	50.0	43.4		ug/L		87	73 - 128	3	20
1,2-Dichloroethene, Total	25		100	119		ug/L		94	79 - 121	2	20
1,2-Dichloropropane	1.0	U	50.0	48.6		ug/L		97	78 - 122	1	20

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

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 545917

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	0.50	U	50.0	49.9		ug/L		100	75 - 124	3	20
1,3-Dichlorobenzene	1.0	U	50.0	51.9		ug/L		104	80 - 119	1	20
1,3-Dichloropropane	1.0	U	50.0	46.3		ug/L		93	80 - 119	1	20
1,4-Dichlorobenzene	1.0	U	50.0	50.5		ug/L		101	79 - 118	1	20
2,2-Dichloropropane	1.0	U	50.0	32.9		ug/L		66	60 - 139	5	20
2-Butanone (MEK)	10	U	250	250	M	ug/L		100	56 - 143	6	20
2-Chlorotoluene	0.50	U	50.0	50.4		ug/L		101	79 - 122	1	20
2-Hexanone	5.0	U	250	243		ug/L		97	57 - 139	5	20
4-Chlorotoluene	1.0	U	50.0	49.4		ug/L		99	78 - 122	2	20
4-Isopropyltoluene	1.0	U	50.0	52.8		ug/L		106	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	5.0	U	250	247		ug/L		99	67 - 130	5	20
Acetone	86		250	320		ug/L		93	39 - 160	5	20
Benzene	1.0	U	50.0	49.3		ug/L		99	79 - 120	0	20
Bromobenzene	1.0	U	50.0	48.4		ug/L		97	80 - 120	2	20
Bromoform	1.0	U	50.0	42.6		ug/L		85	66 - 130	3	20
Bromomethane	5.0	U	50.0	39.7		ug/L		79	53 - 141	4	20
Carbon disulfide	2.0	U	50.0	52.5		ug/L		105	64 - 133	3	20
Carbon tetrachloride	0.50	U	50.0	49.8		ug/L		100	72 - 136	1	20
Chlorobenzene	0.50	U	50.0	50.7		ug/L		101	82 - 118	1	20
Chlorobromomethane	1.0	U	50.0	46.7		ug/L		93	78 - 123	3	20
Chlorodibromomethane	0.50	U	50.0	46.0		ug/L		92	74 - 126	4	20
Chloroethane	5.0	U	50.0	46.8		ug/L		94	60 - 138	5	20
Chloroform	1.0	U	50.0	46.8		ug/L		94	79 - 124	1	20
Chloromethane	1.0	U	50.0	54.8	M	ug/L		110	50 - 139	2	20
cis-1,2-Dichloroethene	24		50.0	67.4		ug/L		87	78 - 123	2	20
cis-1,3-Dichloropropene	1.0	U	50.0	43.7		ug/L		87	75 - 124	2	20
Dibromomethane	1.0	U	50.0	46.3		ug/L		93	79 - 123	1	20
Dichlorobromomethane	1.0	U	50.0	44.0		ug/L		88	79 - 125	3	20
Dichlorodifluoromethane	1.0	U	50.0	56.5		ug/L		113	32 - 152	5	20
Ethylbenzene	0.50	U	50.0	51.4		ug/L		103	79 - 121	0	20
Ethylene Dibromide	1.0	U	50.0	48.3		ug/L		97	75 - 127	3	20
Hexachlorobutadiene	5.0	U	50.0	54.8		ug/L		110	66 - 134	1	20
Isopropylbenzene	1.0	U	50.0	51.8		ug/L		104	72 - 131	1	20
Methyl tert-butyl ether	0.50	U	50.0	46.4		ug/L		93	71 - 124	4	20
Methylene Chloride	5.0	U	50.0	47.0		ug/L		94	74 - 124	1	20
m-Xylene & p-Xylene	1.0	U	50.0	51.4		ug/L		103	80 - 121	2	20
Naphthalene	5.0	U	50.0	51.0		ug/L		102	61 - 128	6	20
n-Butylbenzene	1.0	U	50.0	52.0		ug/L		104	75 - 128	3	20
N-Propylbenzene	1.0	U	50.0	50.4		ug/L		101	76 - 126	1	20
o-Xylene	0.50	U	50.0	49.8		ug/L		100	78 - 122	0	20
sec-Butylbenzene	1.0	U	50.0	50.1		ug/L		100	77 - 126	2	20
Styrene	0.50	U	50.0	50.0		ug/L		100	78 - 123	2	20
tert-Butylbenzene	1.0	U	50.0	50.5		ug/L		101	78 - 124	2	20
Tetrachloroethene	28		50.0	83.1		ug/L		110	74 - 129	3	20
Toluene	1.0	U	50.0	49.1		ug/L		98	80 - 121	1	20
trans-1,2-Dichloroethene	1.0	M	50.0	51.5		ug/L		101	75 - 124	2	20
trans-1,3-Dichloropropene	1.0	U	50.0	42.3		ug/L		85	73 - 127	4	20
Trichloroethene	9.6		50.0	62.5		ug/L		106	79 - 123	2	20

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

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 545917

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	1.0	U	50.0	51.8		ug/L		104	65 - 141	2	20
Vinyl acetate	2.0	U Q	100	76.4		ug/L		76	54 - 146	2	20
Vinyl chloride	3.5		50.0	58.5		ug/L		110	58 - 137	3	20
Xylenes, Total	0.50	U	100	101		ug/L		101	79 - 121	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*95*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*

Lab Sample ID: MB 680-545948/9
Matrix: Water
Analysis Batch: 545948

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 09:44	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 09:44	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 09:44	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 09:44	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 09:44	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 09:44	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 09:44	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 09:44	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 09:44	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 09:44	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 09:44	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 09:44	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 09:44	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 09:44	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 09:44	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 09:44	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 09:44	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 09:44	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1

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

Lab Sample ID: MB 680-545948/9
Matrix: Water
Analysis Batch: 545948

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 09:44	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 09:44	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 09:44	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 09:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 09:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 09:44	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 09:44	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 09:44	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 09:44	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 09:44	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 09:44	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 09:44	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 09:44	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 09:44	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 09:44	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 09:44	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 09:44	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 09:44	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 09:44	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 09:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 09:44	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 09:44	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 09:44	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 09:44	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 09:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*		*11/02/18 09:44*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 09:44*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/02/18 09:44*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/02/18 09:44*	*1*

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

Lab Sample ID: LCS 680-545948/4
Matrix: Water
Analysis Batch: 545948

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	48.4		ug/L		97	78 - 124
1,1,1-Trichloroethane	50.0	47.4		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	47.1		ug/L		94	71 - 121
1,1,2-Trichloroethane	50.0	46.2		ug/L		92	80 - 119
1,1-Dichloroethane	50.0	45.0		ug/L		90	77 - 125
1,1-Dichloroethene	50.0	45.9		ug/L		92	71 - 131
1,1-Dichloropropene	50.0	46.2		ug/L		92	79 - 125
1,2,3-Trichlorobenzene	50.0	44.5		ug/L		89	69 - 129
1,2,3-Trichloropropane	50.0	46.6		ug/L		93	73 - 122
1,2,4-Trichlorobenzene	50.0	44.9		ug/L		90	69 - 130
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	43.6		ug/L		87	62 - 128
1,2-Dichlorobenzene	50.0	47.1		ug/L		94	80 - 119
1,2-Dichloroethane	50.0	44.6		ug/L		89	73 - 128
1,2-Dichloroethene, Total	100	90.2		ug/L		90	79 - 121
1,2-Dichloropropane	50.0	44.5		ug/L		89	78 - 122
1,3,5-Trimethylbenzene	50.0	49.8		ug/L		100	75 - 124
1,3-Dichlorobenzene	50.0	47.9		ug/L		96	80 - 119
1,3-Dichloropropane	50.0	46.0		ug/L		92	80 - 119
1,4-Dichlorobenzene	50.0	47.4		ug/L		95	79 - 118
2,2-Dichloropropane	50.0	46.4	M	ug/L		93	60 - 139
2-Butanone (MEK)	250	210		ug/L		84	56 - 143
2-Chlorotoluene	50.0	50.3		ug/L		101	79 - 122
2-Hexanone	250	214		ug/L		86	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	47.8		ug/L		96	77 - 127
4-Methyl-2-pentanone (MIBK)	250	221		ug/L		88	67 - 130
Acetone	250	205		ug/L		82	39 - 160
Benzene	50.0	46.8		ug/L		94	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	46.6		ug/L		93	66 - 130
Bromomethane	50.0	76.7	Q	ug/L		153	53 - 141
Carbon disulfide	50.0	43.1		ug/L		86	64 - 133
Carbon tetrachloride	50.0	46.9		ug/L		94	72 - 136
Chlorobenzene	50.0	50.3		ug/L		101	82 - 118
Chlorobromomethane	50.0	42.4		ug/L		85	78 - 123
Chlorodibromomethane	50.0	46.9		ug/L		94	74 - 126
Chloroethane	50.0	42.1	M	ug/L		84	60 - 138
Chloroform	50.0	45.8		ug/L		92	79 - 124
Chloromethane	50.0	39.3		ug/L		79	50 - 139
cis-1,2-Dichloroethene	50.0	46.0		ug/L		92	78 - 123
cis-1,3-Dichloropropene	50.0	45.9		ug/L		92	75 - 124
Dibromomethane	50.0	46.0		ug/L		92	79 - 123
Dichlorobromomethane	50.0	45.4		ug/L		91	79 - 125
Dichlorodifluoromethane	50.0	36.7	M	ug/L		73	32 - 152
Ethylbenzene	50.0	49.6		ug/L		99	79 - 121
Ethylene Dibromide	50.0	46.9		ug/L		94	75 - 127
Hexachlorobutadiene	50.0	45.0		ug/L		90	66 - 134

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

Lab Sample ID: LCS 680-545948/4
Matrix: Water
Analysis Batch: 545948

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	50.8		ug/L		102	72 - 131
Methyl tert-butyl ether	50.0	43.5		ug/L		87	71 - 124
Methylene Chloride	50.0	44.2		ug/L		88	74 - 124
m-Xylene & p-Xylene	50.0	48.7		ug/L		97	80 - 121
Naphthalene	50.0	42.4		ug/L		85	61 - 128
n-Butylbenzene	50.0	47.1		ug/L		94	75 - 128
N-Propylbenzene	50.0	51.5		ug/L		103	76 - 126
o-Xylene	50.0	49.7		ug/L		99	78 - 122
sec-Butylbenzene	50.0	51.4		ug/L		103	77 - 126
Styrene	50.0	50.0		ug/L		100	78 - 123
tert-Butylbenzene	50.0	50.2		ug/L		100	78 - 124
Tetrachloroethene	50.0	48.8		ug/L		98	74 - 129
Toluene	50.0	48.0		ug/L		96	80 - 121
trans-1,2-Dichloroethene	50.0	44.2		ug/L		88	75 - 124
trans-1,3-Dichloropropene	50.0	44.4		ug/L		89	73 - 127
Trichloroethene	50.0	46.1		ug/L		92	79 - 123
Trichlorofluoromethane	50.0	46.7		ug/L		93	65 - 141
Vinyl acetate	100	86.7		ug/L		87	54 - 146
Vinyl chloride	50.0	42.1		ug/L		84	58 - 137
Xylenes, Total	100	98.4		ug/L		98	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*81 - 118*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*
Dibromofluoromethane (Surr)	*97*		*80 - 119*
Toluene-d8 (Surr)	*99*		*89 - 112*

Lab Sample ID: LCSD 680-545948/5
Matrix: Water
Analysis Batch: 545948

Client Sample 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	50.9		ug/L		102	78 - 124	5	20
1,1,1-Trichloroethane	50.0	48.8		ug/L		98	74 - 131	3	20
1,1,2,2-Tetrachloroethane	50.0	49.8		ug/L		100	71 - 121	6	20
1,1,2-Trichloroethane	50.0	49.4		ug/L		99	80 - 119	7	20
1,1-Dichloroethane	50.0	46.0		ug/L		92	77 - 125	2	20
1,1-Dichloroethene	50.0	47.7		ug/L		95	71 - 131	4	20
1,1-Dichloropropene	50.0	48.2		ug/L		96	79 - 125	4	20
1,2,3-Trichlorobenzene	50.0	46.8		ug/L		94	69 - 129	5	20
1,2,3-Trichloropropane	50.0	51.2		ug/L		102	73 - 122	9	20
1,2,4-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 130	6	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	45.8		ug/L		92	62 - 128	5	20
1,2-Dichlorobenzene	50.0	50.0		ug/L		100	80 - 119	6	20
1,2-Dichloroethane	50.0	48.2		ug/L		96	73 - 128	8	20
1,2-Dichloroethene, Total	100	93.9		ug/L		94	79 - 121	4	20
1,2-Dichloropropane	50.0	48.9		ug/L		98	78 - 122	9	20

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

Lab Sample ID: LCSD 680-545948/5
Matrix: Water
Analysis Batch: 545948

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	52.3		ug/L		105	75 - 124	5	20
1,3-Dichlorobenzene	50.0	49.6		ug/L		99	80 - 119	4	20
1,3-Dichloropropane	50.0	49.1		ug/L		98	80 - 119	6	20
1,4-Dichlorobenzene	50.0	49.1		ug/L		98	79 - 118	3	20
2,2-Dichloropropane	50.0	46.7	M	ug/L		93	60 - 139	1	20
2-Butanone (MEK)	250	229		ug/L		92	56 - 143	9	20
2-Chlorotoluene	50.0	52.1		ug/L		104	79 - 122	4	20
2-Hexanone	250	234		ug/L		94	57 - 139	9	20
4-Chlorotoluene	50.0	53.4		ug/L		107	78 - 122	4	20
4-Isopropyltoluene	50.0	48.9		ug/L		98	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	238		ug/L		95	67 - 130	7	20
Acetone	250	223		ug/L		89	39 - 160	8	20
Benzene	50.0	48.3		ug/L		97	79 - 120	3	20
Bromobenzene	50.0	53.8		ug/L		108	80 - 120	7	20
Bromoform	50.0	49.4		ug/L		99	66 - 130	6	20
Bromomethane	50.0	82.1	Q	ug/L		164	53 - 141	7	20
Carbon disulfide	50.0	44.4		ug/L		89	64 - 133	3	20
Carbon tetrachloride	50.0	47.4		ug/L		95	72 - 136	1	20
Chlorobenzene	50.0	51.8		ug/L		104	82 - 118	3	20
Chlorobromomethane	50.0	47.4		ug/L		95	78 - 123	11	20
Chlorodibromomethane	50.0	49.6		ug/L		99	74 - 126	5	20
Chloroethane	50.0	43.6	M	ug/L		87	60 - 138	4	20
Chloroform	50.0	48.3		ug/L		97	79 - 124	5	20
Chloromethane	50.0	40.8		ug/L		82	50 - 139	4	20
cis-1,2-Dichloroethene	50.0	48.2		ug/L		96	78 - 123	5	20
cis-1,3-Dichloropropene	50.0	49.6		ug/L		99	75 - 124	8	20
Dibromomethane	50.0	48.8		ug/L		98	79 - 123	6	20
Dichlorobromomethane	50.0	47.8		ug/L		96	79 - 125	5	20
Dichlorodifluoromethane	50.0	38.2		ug/L		76	32 - 152	4	20
Ethylbenzene	50.0	51.2		ug/L		102	79 - 121	3	20
Ethylene Dibromide	50.0	50.6		ug/L		101	75 - 127	8	20
Hexachlorobutadiene	50.0	45.9		ug/L		92	66 - 134	2	20
Isopropylbenzene	50.0	52.5		ug/L		105	72 - 131	3	20
Methyl tert-butyl ether	50.0	47.3		ug/L		95	71 - 124	8	20
Methylene Chloride	50.0	48.4		ug/L		97	74 - 124	9	20
m-Xylene & p-Xylene	50.0	50.9		ug/L		102	80 - 121	4	20
Naphthalene	50.0	45.2		ug/L		90	61 - 128	6	20
n-Butylbenzene	50.0	47.9		ug/L		96	75 - 128	2	20
N-Propylbenzene	50.0	53.0		ug/L		106	76 - 126	3	20
o-Xylene	50.0	50.7		ug/L		101	78 - 122	2	20
sec-Butylbenzene	50.0	53.1		ug/L		106	77 - 126	3	20
Styrene	50.0	52.4		ug/L		105	78 - 123	5	20
tert-Butylbenzene	50.0	52.3		ug/L		105	78 - 124	4	20
Tetrachloroethene	50.0	50.5		ug/L		101	74 - 129	3	20
Toluene	50.0	50.3		ug/L		101	80 - 121	5	20
trans-1,2-Dichloroethene	50.0	45.8		ug/L		92	75 - 124	3	20
trans-1,3-Dichloropropene	50.0	48.1		ug/L		96	73 - 127	8	20
Trichloroethene	50.0	46.9		ug/L		94	79 - 123	2	20

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

Lab Sample ID: LCSD 680-545948/5
Matrix: Water
Analysis Batch: 545948

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	47.8		ug/L		96	65 - 141	2	20
Vinyl acetate			100	93.4		ug/L		93	54 - 146	7	20
Vinyl chloride			50.0	43.3		ug/L		87	58 - 137	3	20
Xylenes, Total			100	102		ug/L		102	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Lab Sample ID: MB 680-545954/9
Matrix: Water
Analysis Batch: 545954

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 10:05	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 10:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 10:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 10:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 10:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 10:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 10:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 10:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 10:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:05	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 10:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 10:05	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 10:05	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1

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

Lab Sample ID: MB 680-545954/9
Matrix: Water
Analysis Batch: 545954

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 10:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 10:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 10:05	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 10:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 10:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 10:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 10:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 10:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 10:05	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 10:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 10:05*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 10:05*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*11/02/18 10:05*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*11/02/18 10:05*	*1*

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

Lab Sample ID: LCS 680-545954/4
Matrix: Water
Analysis Batch: 545954

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	50.2		ug/L		100	78 - 124
1,1,1-Trichloroethane	50.0	46.4		ug/L		93	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.8		ug/L		108	71 - 121
1,1,2-Trichloroethane	50.0	52.7		ug/L		105	80 - 119
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125
1,1-Dichloroethene	50.0	50.0		ug/L		100	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	53.2		ug/L		106	73 - 122
1,2,4-Trichlorobenzene	50.0	53.3		ug/L		107	69 - 130
1,2,4-Trimethylbenzene	50.0	50.7		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.7		ug/L		101	62 - 128
1,2-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119
1,2-Dichloroethane	50.0	46.3		ug/L		93	73 - 128
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121
1,2-Dichloropropane	50.0	55.2		ug/L		110	78 - 122
1,3,5-Trimethylbenzene	50.0	51.2		ug/L		102	75 - 124
1,3-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119
1,3-Dichloropropane	50.0	51.8		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	49.9		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	54.8		ug/L		110	60 - 139
2-Butanone (MEK)	250	273		ug/L		109	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	278		ug/L		111	57 - 139
4-Chlorotoluene	50.0	51.4		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	50.6		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	250	278		ug/L		111	67 - 130
Acetone	250	279		ug/L		112	39 - 160
Benzene	50.0	50.4		ug/L		101	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	54.2		ug/L		108	66 - 130
Bromomethane	50.0	41.1		ug/L		82	53 - 141
Carbon disulfide	50.0	49.6		ug/L		99	64 - 133
Carbon tetrachloride	50.0	47.1		ug/L		94	72 - 136
Chlorobenzene	50.0	48.7		ug/L		97	82 - 118
Chlorobromomethane	50.0	45.8		ug/L		92	78 - 123
Chlorodibromomethane	50.0	47.3		ug/L		95	74 - 126
Chloroethane	50.0	47.0		ug/L		94	60 - 138
Chloroform	50.0	47.9		ug/L		96	79 - 124
Chloromethane	50.0	49.3		ug/L		99	50 - 139
cis-1,2-Dichloroethene	50.0	51.9		ug/L		104	78 - 123
cis-1,3-Dichloropropene	50.0	54.8		ug/L		110	75 - 124
Dibromomethane	50.0	48.6		ug/L		97	79 - 123
Dichlorobromomethane	50.0	49.5		ug/L		99	79 - 125
Dichlorodifluoromethane	50.0	41.3		ug/L		83	32 - 152
Ethylbenzene	50.0	50.6		ug/L		101	79 - 121
Ethylene Dibromide	50.0	51.2		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	50.9		ug/L		102	66 - 134

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

Lab Sample ID: LCS 680-545954/4
Matrix: Water
Analysis Batch: 545954

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	50.3		ug/L		101	72 - 131
Methyl tert-butyl ether	50.0	49.6		ug/L		99	71 - 124
Methylene Chloride	50.0	50.8		ug/L		102	74 - 124
m-Xylene & p-Xylene	50.0	50.4		ug/L		101	80 - 121
Naphthalene	50.0	53.3		ug/L		107	61 - 128
n-Butylbenzene	50.0	52.0		ug/L		104	75 - 128
N-Propylbenzene	50.0	51.5		ug/L		103	76 - 126
o-Xylene	50.0	51.0		ug/L		102	78 - 122
sec-Butylbenzene	50.0	50.9		ug/L		102	77 - 126
Styrene	50.0	53.1		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.5		ug/L		101	78 - 124
Tetrachloroethene	50.0	49.2		ug/L		98	74 - 129
Toluene	50.0	51.6		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	49.5		ug/L		99	75 - 124
trans-1,3-Dichloropropene	50.0	54.2		ug/L		108	73 - 127
Trichloroethene	50.0	47.8		ug/L		96	79 - 123
Trichlorofluoromethane	50.0	44.8		ug/L		90	65 - 141
Vinyl acetate	100	137		ug/L		137	54 - 146
Vinyl chloride	50.0	53.2		ug/L		106	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Lab Sample ID: LCSD 680-545954/5
Matrix: Water
Analysis Batch: 545954

Client Sample 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	49.8		ug/L		100	78 - 124	1	20
1,1,1-Trichloroethane	50.0	47.0		ug/L		94	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.2		ug/L		104	71 - 121	3	20
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	80 - 119	3	20
1,1-Dichloroethane	50.0	51.5		ug/L		103	77 - 125	1	20
1,1-Dichloroethene	50.0	50.8		ug/L		102	71 - 131	2	20
1,1-Dichloropropene	50.0	50.2		ug/L		100	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	53.3		ug/L		107	69 - 129	2	20
1,2,3-Trichloropropane	50.0	50.6		ug/L		101	73 - 122	5	20
1,2,4-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 130	0	20
1,2,4-Trimethylbenzene	50.0	52.1		ug/L		104	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	52.4		ug/L		105	62 - 128	3	20
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119	1	20
1,2-Dichloroethane	50.0	45.7		ug/L		91	73 - 128	1	20
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121	1	20
1,2-Dichloropropane	50.0	55.0		ug/L		110	78 - 122	0	20

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

Lab Sample ID: LCSD 680-545954/5
Matrix: Water
Analysis Batch: 545954

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	52.3		ug/L		105	75 - 124	2	20
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119	3	20
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 119	3	20
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118	1	20
2,2-Dichloropropane	50.0	55.1		ug/L		110	60 - 139	1	20
2-Butanone (MEK)	250	262		ug/L		105	56 - 143	4	20
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122	1	20
2-Hexanone	250	273		ug/L		109	57 - 139	2	20
4-Chlorotoluene	50.0	52.5		ug/L		105	78 - 122	2	20
4-Isopropyltoluene	50.0	52.5		ug/L		105	77 - 127	4	20
4-Methyl-2-pentanone (MIBK)	250	275		ug/L		110	67 - 130	1	20
Acetone	250	274		ug/L		110	39 - 160	2	20
Benzene	50.0	50.5		ug/L		101	79 - 120	0	20
Bromobenzene	50.0	49.5		ug/L		99	80 - 120	1	20
Bromoform	50.0	52.7		ug/L		105	66 - 130	3	20
Bromomethane	50.0	43.1		ug/L		86	53 - 141	5	20
Carbon disulfide	50.0	50.7		ug/L		101	64 - 133	2	20
Carbon tetrachloride	50.0	47.3		ug/L		95	72 - 136	0	20
Chlorobenzene	50.0	48.8		ug/L		98	82 - 118	0	20
Chlorobromomethane	50.0	46.0		ug/L		92	78 - 123	1	20
Chlorodibromomethane	50.0	46.7		ug/L		93	74 - 126	1	20
Chloroethane	50.0	48.4		ug/L		97	60 - 138	3	20
Chloroform	50.0	47.8		ug/L		96	79 - 124	0	20
Chloromethane	50.0	51.8		ug/L		104	50 - 139	5	20
cis-1,2-Dichloroethene	50.0	51.5		ug/L		103	78 - 123	1	20
cis-1,3-Dichloropropene	50.0	53.5		ug/L		107	75 - 124	2	20
Dibromomethane	50.0	47.5		ug/L		95	79 - 123	2	20
Dichlorobromomethane	50.0	48.5		ug/L		97	79 - 125	2	20
Dichlorodifluoromethane	50.0	43.1		ug/L		86	32 - 152	4	20
Ethylbenzene	50.0	50.4		ug/L		101	79 - 121	0	20
Ethylene Dibromide	50.0	49.8		ug/L		100	75 - 127	3	20
Hexachlorobutadiene	50.0	52.7		ug/L		105	66 - 134	4	20
Isopropylbenzene	50.0	51.0		ug/L		102	72 - 131	1	20
Methyl tert-butyl ether	50.0	48.9		ug/L		98	71 - 124	1	20
Methylene Chloride	50.0	50.3		ug/L		101	74 - 124	1	20
m-Xylene & p-Xylene	50.0	51.0		ug/L		102	80 - 121	1	20
Naphthalene	50.0	53.6		ug/L		107	61 - 128	1	20
n-Butylbenzene	50.0	52.9		ug/L		106	75 - 128	2	20
N-Propylbenzene	50.0	52.5		ug/L		105	76 - 126	2	20
o-Xylene	50.0	51.0		ug/L		102	78 - 122	0	20
sec-Butylbenzene	50.0	51.9		ug/L		104	77 - 126	2	20
Styrene	50.0	52.8		ug/L		106	78 - 123	1	20
tert-Butylbenzene	50.0	52.1		ug/L		104	78 - 124	3	20
Tetrachloroethene	50.0	50.6		ug/L		101	74 - 129	3	20
Toluene	50.0	51.6		ug/L		103	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	50.4		ug/L		101	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	53.4		ug/L		107	73 - 127	1	20
Trichloroethene	50.0	47.5		ug/L		95	79 - 123	1	20

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

Lab Sample ID: LCSD 680-545954/5
Matrix: Water
Analysis Batch: 545954

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	45.5		ug/L		91	65 - 141	2	20
Vinyl acetate			100	133		ug/L		133	54 - 146	3	20
Vinyl chloride			50.0	55.6		ug/L		111	58 - 137	4	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-546157/8
Matrix: Water
Analysis Batch: 546157

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethane	1.1	U	1.1	1.1	0.55	ug/L		11/04/18 09:50	1
Ethylene	1.0	U	1.0	1.0	0.50	ug/L		11/04/18 09:50	1
Methane	0.58	U	0.58	0.58	0.29	ug/L		11/04/18 09:50	1
Methane (TCD)	77	U	390	77	39	ug/L		11/04/18 09:50	1

Lab Sample ID: LCS 680-546157/3
Matrix: Water
Analysis Batch: 546157

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethane			288	293		ug/L		102	75 - 125		
Ethylene			269	276		ug/L		102	75 - 125		
Methane			154	152		ug/L		99	75 - 125		

Lab Sample ID: LCS 680-546157/6
Matrix: Water
Analysis Batch: 546157

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methane (TCD)			1920	1890		ug/L		98	75 - 125		

Lab Sample ID: LCSD 680-546157/4
Matrix: Water
Analysis Batch: 546157

Client Sample 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	261		ug/L		91	75 - 125	12	30
Ethylene			269	243		ug/L		90	75 - 125	13	30
Methane			154	135		ug/L		88	75 - 125	12	30

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

Lab Sample ID: LCSD 680-546157/7
Matrix: Water
Analysis Batch: 546157

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	1920	1840		ug/L		96	75 - 125	3	30

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 546157

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	1.6		288	245		ug/L		85	75 - 125
Ethylene	1.3		269	229		ug/L		85	75 - 125

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 546157

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	1.6		288	257		ug/L		89	75 - 125	5	30
Ethylene	1.3		269	243		ug/L		90	75 - 125	6	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-546216/2
Matrix: Water
Analysis Batch: 546216

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U M	1.0	1.0	0.40	mg/L		11/05/18 09:26	1

Lab Sample ID: LCS 680-546216/3
Matrix: Water
Analysis Batch: 546216

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	9.54	M	mg/L		95	87 - 112

Lab Sample ID: LCSD 680-546216/4
Matrix: Water
Analysis Batch: 546216

Client Sample 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	9.87	M	mg/L		99	87 - 112	3	15

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 546216

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10	J1	10.0	17.5	J1	mg/L		75	87 - 112

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

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 546216

Client Sample ID: G6M-13-02X_FAL18
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	J1	10.0	18.3	J1	mg/L		83	87 - 112	4	15

Lab Sample ID: MB 680-546409/37
Matrix: Water
Analysis Batch: 546409

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	1.0	U	1.0	1.0	0.40	mg/L		11/06/18 16:36	1

Lab Sample ID: LCS 680-546409/45
Matrix: Water
Analysis Batch: 546409

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	9.81		mg/L		98	87 - 112

Lab Sample ID: LCSD 680-546409/46
Matrix: Water
Analysis Batch: 546409

Client Sample 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	9.89		mg/L		99	87 - 112	1	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 680-545071/1-A
Matrix: Water
Analysis Batch: 545846

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 545071

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron	50	U	50	50	17	ug/L		10/30/18 20:25	1
Manganese	3.0	U	10	3.0	1.0	ug/L		10/30/18 20:25	1

Lab Sample ID: LCS 680-545071/2-A
Matrix: Water
Analysis Batch: 545846

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 545071

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5270		ug/L		105	87 - 115
Manganese	500	531		ug/L		106	90 - 114

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 545846

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Dissolved
Prep Batch: 545071

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000		5000	6200		ug/L		104	87 - 115
Manganese	160		500	680		ug/L		103	90 - 114

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

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 545846

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Dissolved
Prep Batch: 545071

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	1000		5000	6210		ug/L		104	87 - 115	0	20
Manganese	160		500	682		ug/L		104	90 - 114	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-545068/1-A
Matrix: Water
Analysis Batch: 545199

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 545068

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	3.0	U	3.0	3.0	1.5	ug/L		10/26/18 18:08	1

Lab Sample ID: LCS 680-545068/2-A
Matrix: Water
Analysis Batch: 545199

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 545068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	98.2		ug/L		98	84 - 116

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 545199

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Dissolved
Prep Batch: 545068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	3.6		100	101		ug/L		97	84 - 116

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 545199

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Dissolved
Prep Batch: 545068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	3.6		100	102		ug/L		98	84 - 116	1	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-435792/60
Matrix: Water
Analysis Batch: 435792

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate/Nitrite-N	0.050	U	0.10	0.050	0.019	mg/L		10/31/18 19:26	1

Lab Sample ID: LCS 280-435792/59
Matrix: Water
Analysis Batch: 435792

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	5.26		mg/L		105	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 435792

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate/Nitrite-N	0.095	J	4.00	3.93		mg/L		96	90 - 110

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 435792

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate/Nitrite-N	0.095	J	4.00	3.93		mg/L		96	90 - 110	0	10

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-544806/1
Matrix: Water
Analysis Batch: 544806

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	1.0	mg/L		10/25/18 03:50	1

Lab Sample ID: LCS 680-544806/2
Matrix: Water
Analysis Batch: 544806

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	9.60		mg/L		96	75 - 125

Lab Sample ID: LCSD 680-544806/3
Matrix: Water
Analysis Batch: 544806

Client Sample 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	9.77		mg/L		98	75 - 125	2	30

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 544806

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.0	U	10.0	9.55		mg/L		95	75 - 125

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 544806

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.0	U	10.0	9.52		mg/L		95	75 - 125	0	30

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-435842/4
Matrix: Water
Analysis Batch: 435842

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	0.247	J	1.0	0.50	0.16	mg/L		10/31/18 15:11	1

Lab Sample ID: LCS 280-435842/3
Matrix: Water
Analysis Batch: 435842

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	23.0		mg/L		92	88 - 112

Lab Sample ID: 680-159735-1 MS
Matrix: Water
Analysis Batch: 435842

Client Sample ID: G6M-13-02X_FAL18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Duplicates	29	J1	25.0	50.2	J1	mg/L		84	88 - 112

Lab Sample ID: 680-159735-1 MSD
Matrix: Water
Analysis Batch: 435842

Client Sample ID: G6M-13-02X_FAL18
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	29	J1	25.0	51.9		mg/L		90	88 - 112	3	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-436641/28
Matrix: Water
Analysis Batch: 436641

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	5.0	U	5.0	5.0	1.1	mg/L		11/06/18 19:41	1

Lab Sample ID: LCS 280-436641/27
Matrix: Water
Analysis Batch: 436641

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	192		mg/L		96	90 - 110

GC/MS VOA

Analysis Batch: 545776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-12	G6M-04-05X_FAL18	Total/NA	Water	8260B	
680-159735-13	G6M-02-12X_FAL18	Total/NA	Water	8260B	
680-159735-14	G6M-EB02_FAL18	Total/NA	Water	8260B	
MB 680-545776/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545776/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545776/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	8260B	
680-159735-4	G6M-04-22X_FAL18	Total/NA	Water	8260B	
MB 680-545781/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545781/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545781/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-5	G6M-04-31X_FAL18	Total/NA	Water	8260B	
680-159735-6	G6M_TB04	Total/NA	Water	8260B	
680-159735-7	AOC50-DUP01_FAL18	Total/NA	Water	8260B	
680-159735-8	G6M-04-07X_FAL18	Total/NA	Water	8260B	
680-159735-15	G6M-02-11X_FAL18	Total/NA	Water	8260B	
680-159735-16	G6M-04-11X_FAL18	Total/NA	Water	8260B	
680-159735-17	G6M-02-07X_FAL18	Total/NA	Water	8260B	
MB 680-545917/12	Method Blank	Total/NA	Water	8260B	
LCS 680-545917/7	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545917/8	Lab Control Sample Dup	Total/NA	Water	8260B	
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	8260B	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	8260B	

Analysis Batch: 545948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-9	G6M-04-06X_FAL18	Total/NA	Water	8260B	
680-159735-10	XSA-12-95X_FAL18	Total/NA	Water	8260B	
680-159735-18	XSA-12-98X_FAL18	Total/NA	Water	8260B	
680-159735-19	G6M-02-06X_FAL18	Total/NA	Water	8260B	
680-159735-20	G6M-02-13X_FAL18	Total/NA	Water	8260B	
MB 680-545948/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545948/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545948/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 545954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-11	G6M-03-10X_FAL18	Total/NA	Water	8260B	
MB 680-545954/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545954/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545954/5	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 546157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	RSK-175	
680-159735-20	G6M-02-13X_FAL18	Total/NA	Water	RSK-175	
MB 680-546157/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-546157/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-546157/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-546157/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-546157/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	RSK-175	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 546216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	9056A	
MB 680-546216/2	Method Blank	Total/NA	Water	9056A	
LCS 680-546216/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-546216/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	9056A	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	9056A	

Analysis Batch: 546409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-546409/37	Method Blank	Total/NA	Water	9056A	
LCS 680-546409/45	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-546409/46	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 545068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Dissolved	Water	3005A	
680-159735-4	G6M-04-22X_FAL18	Dissolved	Water	3005A	
680-159735-5	G6M-04-31X_FAL18	Dissolved	Water	3005A	
680-159735-7	AOC50-DUP01_FAL18	Dissolved	Water	3005A	
680-159735-8	G6M-04-07X_FAL18	Dissolved	Water	3005A	
680-159735-9	G6M-04-06X_FAL18	Dissolved	Water	3005A	
680-159735-10	XSA-12-95X_FAL18	Dissolved	Water	3005A	
680-159735-11	G6M-03-10X_FAL18	Dissolved	Water	3005A	
680-159735-13	G6M-02-12X_FAL18	Dissolved	Water	3005A	
680-159735-14	G6M-EB02_FAL18	Dissolved	Water	3005A	
680-159735-15	G6M-02-11X_FAL18	Dissolved	Water	3005A	
680-159735-16	G6M-04-11X_FAL18	Dissolved	Water	3005A	
680-159735-17	G6M-02-07X_FAL18	Dissolved	Water	3005A	
680-159735-18	XSA-12-98X_FAL18	Dissolved	Water	3005A	
680-159735-19	G6M-02-06X_FAL18	Dissolved	Water	3005A	
680-159735-20	G6M-02-13X_FAL18	Dissolved	Water	3005A	
MB 680-545068/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-545068/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-159735-1 MS	G6M-13-02X_FAL18	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 545068 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1 MSD	G6M-13-02X_FAL18	Dissolved	Water	3005A	

Prep Batch: 545071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Dissolved	Water	3005A	
680-159735-4	G6M-04-22X_FAL18	Dissolved	Water	3005A	
680-159735-5	G6M-04-31X_FAL18	Dissolved	Water	3005A	
680-159735-7	AOC50-DUP01_FAL18	Dissolved	Water	3005A	
680-159735-8	G6M-04-07X_FAL18	Dissolved	Water	3005A	
680-159735-9	G6M-04-06X_FAL18	Dissolved	Water	3005A	
680-159735-10	XSA-12-95X_FAL18	Dissolved	Water	3005A	
680-159735-11	G6M-03-10X_FAL18	Dissolved	Water	3005A	
680-159735-13	G6M-02-12X_FAL18	Dissolved	Water	3005A	
680-159735-14	G6M-EB02_FAL18	Dissolved	Water	3005A	
680-159735-15	G6M-02-11X_FAL18	Dissolved	Water	3005A	
680-159735-16	G6M-04-11X_FAL18	Dissolved	Water	3005A	
680-159735-17	G6M-02-07X_FAL18	Dissolved	Water	3005A	
680-159735-18	XSA-12-98X_FAL18	Dissolved	Water	3005A	
680-159735-19	G6M-02-06X_FAL18	Dissolved	Water	3005A	
680-159735-20	G6M-02-13X_FAL18	Dissolved	Water	3005A	
MB 680-545071/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-545071/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-159735-1 MS	G6M-13-02X_FAL18	Dissolved	Water	3005A	
680-159735-1 MSD	G6M-13-02X_FAL18	Dissolved	Water	3005A	

Analysis Batch: 545199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Dissolved	Water	6020A	545068
680-159735-4	G6M-04-22X_FAL18	Dissolved	Water	6020A	545068
680-159735-5	G6M-04-31X_FAL18	Dissolved	Water	6020A	545068
680-159735-7	AOC50-DUP01_FAL18	Dissolved	Water	6020A	545068
680-159735-8	G6M-04-07X_FAL18	Dissolved	Water	6020A	545068
680-159735-9	G6M-04-06X_FAL18	Dissolved	Water	6020A	545068
680-159735-10	XSA-12-95X_FAL18	Dissolved	Water	6020A	545068
680-159735-11	G6M-03-10X_FAL18	Dissolved	Water	6020A	545068
680-159735-13	G6M-02-12X_FAL18	Dissolved	Water	6020A	545068
680-159735-14	G6M-EB02_FAL18	Dissolved	Water	6020A	545068
680-159735-15	G6M-02-11X_FAL18	Dissolved	Water	6020A	545068
680-159735-16	G6M-04-11X_FAL18	Dissolved	Water	6020A	545068
680-159735-17	G6M-02-07X_FAL18	Dissolved	Water	6020A	545068
680-159735-18	XSA-12-98X_FAL18	Dissolved	Water	6020A	545068
680-159735-19	G6M-02-06X_FAL18	Dissolved	Water	6020A	545068
680-159735-20	G6M-02-13X_FAL18	Dissolved	Water	6020A	545068
MB 680-545068/1-A	Method Blank	Total Recoverable	Water	6020A	545068
LCS 680-545068/2-A	Lab Control Sample	Total Recoverable	Water	6020A	545068
680-159735-1 MS	G6M-13-02X_FAL18	Dissolved	Water	6020A	545068
680-159735-1 MSD	G6M-13-02X_FAL18	Dissolved	Water	6020A	545068

Analysis Batch: 545846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Dissolved	Water	6010C	545071

Metals (Continued)

Analysis Batch: 545846 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-4	G6M-04-22X_FAL18	Dissolved	Water	6010C	545071
680-159735-5	G6M-04-31X_FAL18	Dissolved	Water	6010C	545071
680-159735-7	AOC50-DUP01_FAL18	Dissolved	Water	6010C	545071
680-159735-8	G6M-04-07X_FAL18	Dissolved	Water	6010C	545071
680-159735-9	G6M-04-06X_FAL18	Dissolved	Water	6010C	545071
680-159735-10	XSA-12-95X_FAL18	Dissolved	Water	6010C	545071
680-159735-11	G6M-03-10X_FAL18	Dissolved	Water	6010C	545071
680-159735-13	G6M-02-12X_FAL18	Dissolved	Water	6010C	545071
680-159735-14	G6M-EB02_FAL18	Dissolved	Water	6010C	545071
680-159735-15	G6M-02-11X_FAL18	Dissolved	Water	6010C	545071
680-159735-16	G6M-04-11X_FAL18	Dissolved	Water	6010C	545071
680-159735-17	G6M-02-07X_FAL18	Dissolved	Water	6010C	545071
680-159735-18	XSA-12-98X_FAL18	Dissolved	Water	6010C	545071
680-159735-19	G6M-02-06X_FAL18	Dissolved	Water	6010C	545071
680-159735-20	G6M-02-13X_FAL18	Dissolved	Water	6010C	545071
MB 680-545071/1-A	Method Blank	Total Recoverable	Water	6010C	545071
LCS 680-545071/2-A	Lab Control Sample	Total Recoverable	Water	6010C	545071
680-159735-1 MS	G6M-13-02X_FAL18	Dissolved	Water	6010C	545071
680-159735-1 MSD	G6M-13-02X_FAL18	Dissolved	Water	6010C	545071

General Chemistry

Analysis Batch: 435792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	353.2	
MB 280-435792/60	Method Blank	Total/NA	Water	353.2	
LCS 280-435792/59	Lab Control Sample	Total/NA	Water	353.2	
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	353.2	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	353.2	

Analysis Batch: 435842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	9060A	
MB 280-435842/4	Method Blank	Total/NA	Water	9060A	
LCS 280-435842/3	Lab Control Sample	Total/NA	Water	9060A	
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	9060A	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	9060A	

Analysis Batch: 436641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	SM 2320B	
MB 280-436641/28	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-436641/27	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 544806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1	G6M-13-02X_FAL18	Total/NA	Water	9034	
MB 680-544806/1	Method Blank	Total/NA	Water	9034	
LCS 680-544806/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-544806/3	Lab Control Sample Dup	Total/NA	Water	9034	

General Chemistry (Continued)

Analysis Batch: 544806 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159735-1 MS	G6M-13-02X_FAL18	Total/NA	Water	9034	
680-159735-1 MSD	G6M-13-02X_FAL18	Total/NA	Water	9034	

Client Sample ID: G6M-13-02X_FAL18

Lab Sample ID: 680-159735-1

Date Collected: 10/24/18 09:15

Matrix: Water

Date Received: 10/25/18 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	545781	11/01/18 14:15	UI	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	546157	11/04/18 14:06	KAB	TAL SAV
	Instrument ID: CVGU									
Total/NA	Analysis	9056A		1	5 mL	5 mL	546216	11/05/18 15:31	TBH	TAL SAV
	Instrument ID: CICH									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 20:46	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 18:15	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total/NA	Analysis	353.2		1	100 mL	100 mL	435792	10/31/18 19:28	SVC	TAL DEN
	Instrument ID: WC_Alp 2									
Total/NA	Analysis	9034		1	250 mL	250 mL	544806	10/26/18 03:41	DAM	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	9060A		1			435842	10/31/18 19:31	LPL	TAL DEN
	Instrument ID: WC_SHI3									
Total/NA	Analysis	SM 2320B		1			436641	11/06/18 22:44	SGB	TAL DEN
	Instrument ID: WC_AT2									

Client Sample ID: G6M-04-22X_FAL18

Lab Sample ID: 680-159735-4

Date Collected: 10/22/18 11:00

Matrix: Water

Date Received: 10/25/18 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	545781	11/01/18 14:40	UI	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:05	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:12	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-31X_FAL18

Lab Sample ID: 680-159735-5

Date Collected: 10/22/18 08:20

Matrix: Water

Date Received: 10/25/18 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	545917	11/02/18 02:51	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-31X_FAL18

Lab Sample ID: 680-159735-5
Date Collected: 10/22/18 08:20
Matrix: Water
Date Received: 10/25/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6010C		1			545846	10/30/18 22:47	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:43	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M_TB04

Lab Sample ID: 680-159735-6
Date Collected: 10/24/18 00:00
Matrix: Water
Date Received: 10/25/18 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	545917	11/02/18 02:04	JLK	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: AOC50-DUP01_FAL18

Lab Sample ID: 680-159735-7
Date Collected: 10/22/18 08:30
Matrix: Water
Date Received: 10/25/18 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	545917	11/02/18 03:37	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:28	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 18:53	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-07X_FAL18

Lab Sample ID: 680-159735-8
Date Collected: 10/22/18 13:30
Matrix: Water
Date Received: 10/25/18 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		2	5 mL	5 mL	545917	11/02/18 07:06	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:00	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:09	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-06X_FAL18

Lab Sample ID: 680-159735-9

Date Collected: 10/22/18 14:20

Matrix: Water

Date Received: 10/25/18 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	545948	11/02/18 12:38	Y1S	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:23	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 18:42	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-95X_FAL18

Lab Sample ID: 680-159735-10

Date Collected: 10/23/18 09:00

Matrix: Water

Date Received: 10/25/18 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	545948	11/02/18 11:11	Y1S	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:17	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 18:38	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-03-10X_FAL18

Lab Sample ID: 680-159735-11

Date Collected: 10/23/18 10:15

Matrix: Water

Date Received: 10/25/18 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	545954	11/02/18 12:08	Y1S	TAL SAV
	Instrument ID: CMSP2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:31	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:39	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-05X_FAL18

Lab Sample ID: 680-159735-12

Date Collected: 10/23/18 11:15

Matrix: Water

Date Received: 10/25/18 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	545776	11/01/18 19:30	JLK	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: G6M-04-05X_FAL18

Date Collected: 10/23/18 11:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-12

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	545776	11/01/18 19:30	JLK	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-02-12X_FAL18

Date Collected: 10/23/18 13:00
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	545776	11/01/18 19:54	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:26	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:28	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-EB02_FAL18

Date Collected: 10/23/18 13:15
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-14

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	545776	11/01/18 20:17	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:10	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:16	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-11X_FAL18

Date Collected: 10/23/18 14:10
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-15

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	545917	11/02/18 04:00	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:21	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV

Client Sample ID: G6M-02-11X_FAL18

Lab Sample ID: 680-159735-15

Date Collected: 10/23/18 14:10

Matrix: Water

Date Received: 10/25/18 09:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6020A		1			545199	10/26/18 19:24	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-04-11X_FAL18

Lab Sample ID: 680-159735-16

Date Collected: 10/22/18 11:30

Matrix: Water

Date Received: 10/25/18 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	545917	11/02/18 04:23	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:49	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:01	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-07X_FAL18

Lab Sample ID: 680-159735-17

Date Collected: 10/23/18 09:40

Matrix: Water

Date Received: 10/25/18 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	545917	11/02/18 04:47	JLK	TAL SAV
	Instrument ID: CMSB									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:54	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:05	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: XSA-12-98X_FAL18

Lab Sample ID: 680-159735-18

Date Collected: 10/23/18 11:35

Matrix: Water

Date Received: 10/25/18 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	545948	11/02/18 11:32	Y1S	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:44	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Client Sample ID: XSA-12-98X_FAL18

Date Collected: 10/23/18 11:35
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Analysis	6020A		1			545199	10/26/18 18:57	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-06X_FAL18

Date Collected: 10/22/18 13:55
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-19

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	545948	11/02/18 11:54	Y1S	TAL SAV
	Instrument ID: CMSA2									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 22:16	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 19:20	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: G6M-02-13X_FAL18

Date Collected: 10/24/18 12:10
Date Received: 10/25/18 09:20

Lab Sample ID: 680-159735-20

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	545948	11/02/18 12:16	Y1S	TAL SAV
	Instrument ID: CMSA2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	546157	11/04/18 14:45	KAB	TAL SAV
	Instrument ID: CVGU									
Dissolved	Prep	3005A			50 mL	50 mL	545071	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6010C		1			545846	10/30/18 21:12	BCB	TAL SAV
	Instrument ID: ICPF									
Dissolved	Prep	3005A			50 mL	250 mL	545068	10/26/18 10:10	AJR	TAL SAV
Dissolved	Analysis	6020A		1			545199	10/26/18 18:34	BJB	TAL SAV
	Instrument ID: ICPMSD									

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments: Cool to 4°C

Equipment:

KOMAN, Long Term Monitoring, AOC 50 Fall 2018

Analytical Test Method

	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLDFLT-FE,MN	SW6020A/FLDFLT-AS	SW8260C-VOCs	RSK175-Dissolved Gases	AG310B-Alkalinity	E353.2-Nitrite Nitrate as N	SW9034-Sulfide	SW9056A-SO4	SW9060A-TOC		Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-13-02X-FALL8	WG	10/24/18	0915	BrA	X	X	X	X	X	X	X	X	X		G6M-13-02X	N1		
2	G6M-13-02X-MS-FALL8	WG	10/24/18	0915	BrA	X	X	X	X	X	X	X	X	X		G6M-13-02X	N1		
3	G6M-13-02X-MSD-FALL8	WG	10/24/18	0915	BrA	X	X	X	X	X	X	X	X	X		G6M-13-02X	N1		
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Cooler: **Turn Around Time:** Routine

680-159735

Relinquished by: *(Signature)*	Date	Time
	10/24/18	
	10/24/18	1800

Received by: *(Signature)*	Date	Time
	10/24/18	1530

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10.25.18 0920

3.9|4.1

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-04A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

Analytical Test Method

						SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs					
	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018					9	9	29					
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
1	~~G6M-04-11X_FAL18~~	~~WG~~				X	X	X	~~G6M-04-11X~~	N1	~~35.00~~	~~45.00~~		1
2	G6M-04-22X_FAL18	WG	10/22/18	1100	B:A	X	X	X	G6M-04-22X	N1	74.00	84.00		1
3	G6M-04-31X_FAL18	WG	10/22/18	0820	B:A	X	X	X	G6M-04-31X	N1	68.00	78.00		1
4	G6M_~~TB06~~ TB04	WQ	10/24/18					X	FIELDQC	~~TB04~~ TB6	0.00	0.00		1
	AOC50-DUP01-FAL18	WG	10/24/18	0830	B:A	X	X	X	FIELDQC	DUP				1
		Turnaround Time:												

Relinquished by: *(Signature)*	Date	Time
	10/24/18	
	10/24/18	1840

Received by: ~~*(Signature)*~~	Date	Time
	10/24/18	1530

680-159735

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10.25.18 0920

3.9/4.1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment:

Analytical Test Method

						SW6010C/FLDFLT-Fe,Mn	SW6020A/FLDFLT-As	SW8260C-VOCs										
KOMAN, Long Term Monitoring, AOC 50 Fall 2018																		
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-04-07X_FAL18	WG	10/22/18	1330	BrA	X	X	X							G6M-04-07X	N		
2	G6M-04-06X-FAL18	WG	10/22/18	1420	BrA	X	X	X							G6M-04-06X	N		
3	XSA-12-95X_FAL18	WG	10/23/18	0900	BrA	X	X	X							XSA-12-95X	N		
4	G6M-03-10X-FAL18	WG	10/23/18	1015	BrA	X	X	X							G6M-03-10X	N		
5	G6M-04-05X_FAL18	WG	10/23/18	1115	BrA	X	X	X							G6M-04-05X	N		
6	G6M-02-12X-FAL18	WG	10/23/18	1300	BrA	X	X	X							G6M-02-12X	N		
7	G6M-EB02-FAL18	WG	10/23/18	1315	BrA	X	X	X							EB02	Field QC		
8	G6M-02-11X-FAL18	WG	10/23/18	1410	BrA	X	X	X							G6M-02-11X	N		
9	~~G6M-03-03X_FAL18~~	~~WG~~	~~10/23/18~~	0915														
10																		
Cooler:		**Turn Around Time:**																

680-159735

Relinquished by: *(Signature)*	Date	Time
	10/24/18	
	10/24-18	180

Received by: *(Signature)*	Date	Time
	10.24.18	1530

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10.25.18 0920

3.9/4.1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-04A

KGS

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

						Analytical Test Method	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs					
	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018						9	9	29					
	Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
1	G6M-04-11X_FAL18	WG	10/22/18	1130	GH		X	X	X	G6M-04-11X	N1	35.00	45.00		1
2	~~G6M-04-22X_FAL18~~	~~WG~~					X	X	X	~~G6M-04-22X~~	N1	74.00	84.00		1
3	~~G6M-04-31X_FAL18~~	~~WG~~					X	X	X	~~G6M-04-31X~~	N1	68.00	78.00		1
4	~~G6M_TB06~~	~~WQ~~							X	~~FIELDQC~~	TB6	0.00	0.00		1
															1
		Turnaround Time:													

Relinquished by: *(Signature)*	Date	Time
	10/24/18	1330
	10/24/18	
	10.24.18	1820

Received by: *(Signature)*	Date	Time
	10/24	1330
	10.24.18	1820

680-159735

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10.25.18 0920

3.9/4.1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

Equipment:

						SW6010C/FLOFLT-Fe Mn	SW6020A/FLOFLT-As	SW8260C-VOCs	RSK175-Dissolved Gases	SW9060A-TOC							
KOMAN, Long Term Monitoring, AOC 50 Fall 2018																	
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top - Bottom
1	G6M-02-07X_FALL8	WG	10/23/18	0940	GH	X	X	X							G6M-02-07X	N,	
2	XSA-12-98X_FALL8	WG	10/23/18	1135	GH	X	X	X							XSA-12-98X	N,	
3	G6M-02-06X_FALL8	WG	10/22/18	1355	GH	X	X	X							G6M-02-06X	N,	
4	G6M-02-13X-FALL8	WG	10/24/18	1210	GH	X	X	X	X	X					G6M-02-13X	N,	
5																	
6																	
7																	
8																	
9																	
10																	
Cooler:		**Turn Around Time:** Routine															

680-159735

Relinquished by: *(Signature)*	Date	Time
	10/24/18	1330
	10/24/18	
	10/24/18	1700

Received by: *(Signature)*	Date	Time
	10/24	1330
	10/24/18	1700

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10.25.18 0920

3.9|4.1

CHAIN-OF ISTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

AOC 50 Vertical Profile Sampling Event

Equipment:

VOCS (3-40ml VOA vials, HCl)

680-159735 Chain of Custody

KOMAN, AOC 50 Drilling Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.		Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-18-02-GW-84-88	GW	10/22/18	1530	CV	✓	G6M-18-02	GW	84	88
2	G6M-18-02-GW-94-98	GW	10/23/18	0915	CV	✓		GW	94	98
3	G6M-18-02-GW-94-98-MS	GW	10/23/18	0915	CV	✓		GW	94	98
4	G6M-18-02-GW-94-98-MSD	GW	10/23/18	0915	CV	✓		GW	94	98
5	G6M-18-02-GW-104-108	GW	10/23/18	1045	CV	✓		GW	104	108
6	G6M-18-02-GW-114-118	GW	10/23/18	1205	CV	✓		GW	114	118
7	G6M-18-02-GW_FD-2	GW	10/23/18	1205	CV	✓		GW	114	118
8	G6M-18-02-GW-124-128	GW	10/23/18	1445	CV	✓		GW	124	128
9	G6M-EB02	WQ	10/23/18	1630	CV	✓		QC	-	-
10	G6M-TB01	WQ	10/22/18	0945	CV	✓		QC	-	-

Cooler: **Turn Around Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Chris Vignola	10/24/18	1330		10/24/18	1330
	10/24/18				
	10/24/18			10/25/18	1530
				10.25.18	0900

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

360325-Boston

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments: Cool to 4°C

Equipment:

KOMAN, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLDFLT-Fe,Mn	SW6020A/FLDFLT-As	SW8260C-VOCs	RSK175-Dissolved Gases	Ad3308-Alkalinity	E353.2-Nitrite Nitrate as N	SW9034-Sulfide	SW9056A-SO4	SW9060A-TOC		Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-13-02X-FALL18	WG	10/24/18	0915	B/A	X	X	X	X	X	X	X	X	X		G6M-13-02X	N		
2	G6M-13-02X-MS-FALL18	WG	10/24/18	0915	B/A	X	X	X	X	X	X	X	X	X		G6M-13-02X	N		
3	G6M-13-02X-MSD-FALL18	WG	10/24/18	0915	B/A	X	X	X	X	X	X	X	X	X		G6M-13-02X	N		
4																			
5																			
6																			
7																			
8																			
9																			
10																			
Cooler:		Turn Around Time: Routine																	

Relinquished by: *(Signature)*	Date	Time
	10/24/18	
	10/24/18	1800

Received by: *(Signature)*	Date	Time
	10/24/18	1530
	10/25/18	0900

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-04A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Comments	Cooler
	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018	Analytical Test Method				9	9	29						
1	~~G6M-04-11X_FAL18~~	~~WG~~				X	X	X	~~G6M-04-11X~~	N1	~~35.00~~	~~46.00~~		1
2	G6M-04-22X_FAL18	WG	10/22/18	1100	B:A	X	X	X	G6M-04-22X	N1	74.00	84.00		1
3	G6M-04-31X_FAL18	WG	10/22/18	0820	B:A	X	X	X	G6M-04-31X	N1	68.00	78.00		1
4	G6M_~~TB06~~ TB04	WQ	10/24/18	—				X	FIELDQC	~~TB~~ TB	0.00	0.00		1
	AOC50-DUP01-FAL18	WG	10/22/18	0830	B:A	X	X	X	FIELDQC	DUP				1
		Turnaround Time:												

Relinquished by: *(Signature)*	Date	Time	Received by: ~~*(Signature)*~~	Date	Time
	10/24/18			10/24/18	1530
	10/24/18	1800		10/25/18	0900

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

Page 1 of

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

Equipment:

						SW6010C/FLDFLT-Fe,Mn	SW6020A / FLDFLT-As	SW8260C-VOCs								
KOMAN, Long Term Monitoring, AOC 50 Fall 2018																
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top - Bottom
1	G6M-04-07X_FALL8	WG	10/22/18	1330	B/A	X	X	X							G6M-04-07X	N	
2	G6M-04-06X-FALL8	WG	10/22/18	1420	B/A	X	X	X							G6M-04-06X	N	
3	XSA-12-95X_FALL8	WG	10/23/18	0900	B/A	X	X	X							XSA-12-95X	N	
4	G6M-03-10X-FALL8	WG	10/23/18	1015	B/A	X	X	X							G6M-03-10X	N	
5	G6M-04-05X-FALL8	WG	10/23/18	1115	B/A	~~X~~	~~X~~	X							G6M-04-05X	N	
6	G6M-02-12X-FALL8	WG	10/23/18	1300	B/A	X	X	X							G6M-02-12X	N	
7	G6M-EB02-FALL8	~~WG~~ WQ	10/23/18	1315	B/A	X	X	X							EB02	Field QC	
8	G6M-02-11X-FALL8	WG	10/23/18	1410	B/A	X	X	X							G6M-02-11X	N	
9	~~G6M-03-02X-FALL8~~	~~WG~~	~~10/24/18~~	~~0915~~													
10																	
Cooler:		**Turn Around Time:**															

Relinquished by: *(Signature)*	Date	Time
Beth Q	10/24/18	
	10/24-18	1800

Received by: *(Signature)*	Date	Time
	10/24-18	1530
	10/25/18	0900

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC # 20181016-04A

Project Name: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Project Number: DEVNS-LTM	POC: Jerry Lanier 912.354.7858 jerry.lanier@testamericainc.com	
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404	

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	Water Quality Control Matrix

Code	Container/Preservative
29	3* 40mL glass VOA Vials, HCl, pH < 2; Cool < 6°C
9	1* 250mL, plastic, HNO3, pH < 2; Cool < 6°C

						Analytical Test Method							
						SW6010C/FLDFLT - Fe Mn	SW6020A/FLDFLT - As	SW8260C - VOCs			Depth (ft bgs)		
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Top	Bottom	Comments	Cooler
	Event: KOMAN, Long Term Monitoring, AOC 50 Fall 2018					9	9	29						
1	G6M-04-11X_FAL18	WG	10/22/18	1130	GH	X	X	X	G6M-04-11X	N1	35.00	45.00		1
2	~~G6M-04-22X_FALT8~~	~~WG~~				X	X	X	~~G6M-04-22X~~	N1	74.00	84.00		1
3	~~G6M-04-31X_FAL18~~	~~WG~~				X	X	X	~~G6M-04-31X~~	N1	68.00	78.00		1
4	~~G6M_TB06~~	~~WQ~~						X	~~FIELDQC~~	TB6	0.00	0.00		1
														1
		Turnaround Time:												

Relinquished by: *(Signature)*	Date	Time
	10/24/18	1330
	10/24/18	
	10-24-18	1820

Received by: *(Signature)*	Date	Time
	10/24	1330
	10-24-18	1820
	10/25/18	0910

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Analytical Test Method

Comments:

Equipment:

KOMAN, Long Term Monitoring, AOC 50 Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	SW6010C/FLOFLT-Fe Mn	SW6020A/FLDFLT-As	SW8260C-VOCs	RSK175-Dissolved Gases	SW9060A-TOC					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-02-07X_FALI8	WG	10/23/18	0940	GH	X	X	X							G6M-02-07X	N		
2	XSA-12-98X_FALI8	WG	10/23/18	1135	GH	X	X	X							XSA-12-98X	N		
3	G6M-02-06X_FALI8	WG	10/22/18	1355	GH	X	X	X							G6M-02-06X	N		
4	G6M-02-13X-FALI8	WG	10/24/18	1210	GH	X	X	X	X	X					G6M-02-13X	N		
5																		
6																		
7																		
8																		
9																		
10																		
Cooler:		Turn Around Time: Routine																

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	10/24/18	1330		10/24	1330
	10/24/18			10/24/18	1530
	10/24/18	1800		10/25/18	0900

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159735-1

Login Number: 159735
List Number: 1
Creator: Laughlin, Paul D

List Source: 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.	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.	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: KOMAN Government Solutions, LLC

Job Number: 680-159735-1

Login Number: 159735
List Number: 2
Creator: Diffendall, Jessica L

List Source: TestAmerica Denver
List Creation: 10/27/18 09:49 AM

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	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18 *
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Georgia	State Program	4	803	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18 *
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18 *
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18 *
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18 *
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18 *
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18 *
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18 *
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18 *
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devens - LTM / AOC 50 Fall 2018

TestAmerica Job ID: 680-159735-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

B.3

Fall 2018 Vertical Profile Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-159889-1
Client Project/Site: Fort Devens / AOC 50 Drilling

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
11/8/2018 9:44:27 AM

Jerry Lanier, Project Manager I
(912)250-0281
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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.

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Job ID: 680-159889-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC 50 Drilling

Report Number: 680-159889-1

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 10/25/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.3 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-18-02-GW-84-88 (680-159889-1), G6M-18-02-GW-94-98 (680-159889-2), G6M-18-02-GW-104-108 (680-159889-3), G6M-18-02-GW-114-118 (680-159889-4), G6M-18-02-GW-FD-2 (680-159889-5), G6M-18-02-GW-124-128 (680-159889-6), G6M-EB02 (680-159889-7) and TB-01 (680-159889-8) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/02/2018 and 11/05/2018.

The closing calibration verification (CCV) analyzed in batch 545954 was outside the method criteria for the 12 hour window by 9 minutes. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met.

(CCVC 680-545954/30)

The continuing calibration verification (CCV) associated with batch 680-545954 recovered above the upper control limit for 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 680-546210 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 laboratory control sample and the laboratory control sample duplicate (LCS/LCSD) for analytical batch 680-546210 recovered outside control limits for the following analyte(s): Bromomethane. Bromomethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

The lot test of the laboratory trip blank water associated with indicated a detection above the reporting limit (RL for the following analyte): Chloroform. Reanalysis confirmed the presence of Chloroform therefore the original results have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-546210.

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

Job ID: 680-159889-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159889-1	G6M-18-02-GW-84-88	Water	10/22/18 15:30	10/25/18 09:24
680-159889-2	G6M-18-02-GW-94-98	Water	10/23/18 09:15	10/25/18 09:24
680-159889-3	G6M-18-02-GW-104-108	Water	10/23/18 10:45	10/25/18 09:24
680-159889-4	G6M-18-02-GW-114-118	Water	10/23/18 12:05	10/25/18 09:24
680-159889-5	G6M-18-02-GW-FD-2	Water	10/23/18 12:05	10/25/18 09:24
680-159889-6	G6M-18-02-GW-124-128	Water	10/23/18 12:45	10/25/18 09:24
680-159889-7	G6M-EB02	Water	10/23/18 16:30	10/25/18 09:24
680-159889-8	TB-01	Water	10/22/18 00:00	10/25/18 09:24

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	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 = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.

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)
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)

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Client Sample ID: G6M-18-02-GW-84-88 **Lab Sample ID: 680-159889-1**

Date Collected: 10/22/18 15:30 **Matrix: Water**

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 15:26	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 15:26	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 15:26	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 15:26	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 15:26	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 15:26	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 15:26	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 15:26	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 15:26	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 15:26	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 15:26	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 15:26	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 15:26	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 15:26	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 15:26	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 15:26	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 15:26	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 15:26	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 15:26	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 15:26	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 15:26	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 15:26	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 15:26	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 15:26	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 15:26	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 15:26	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 15:26	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 15:26	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 15:26	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 15:26	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 15:26	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 15:26	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 15:26	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 15:26	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 15:26	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 15:26	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 15:26	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 15:26	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 15:26	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 15:26	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 15:26	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 15:26	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 15:26	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 15:26	1

Client Sample ID: G6M-18-02-GW-84-88

Lab Sample ID: 680-159889-1

Date Collected: 10/22/18 15:30

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	**0.69**	**J**	10	0.50	0.30	ug/L		11/02/18 15:26	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 15:26	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 15:26	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 15:26	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 15:26	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 15:26	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 15:26	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 15:26	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 15:26	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 15:26	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 15:26	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 15:26	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 15:26	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 15:26	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 15:26	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 15:26	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 15:26	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 15:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*11/02/18 15:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/02/18 15:26*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/02/18 15:26*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/02/18 15:26*	*1*

Client Sample ID: G6M-18-02-GW-94-98

Lab Sample ID: 680-159889-2

Date Collected: 10/23/18 09:15

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 14:58	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 14:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/05/18 14:58	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 14:58	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 14:58	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/05/18 14:58	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 14:58	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/05/18 14:58	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 14:58	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/05/18 14:58	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 14:58	1
1,2-Dichloroethane	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 14:58	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/05/18 14:58	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/05/18 14:58	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/05/18 14:58	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 14:58	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Client Sample ID: G6M-18-02-GW-94-98
Date Collected: 10/23/18 09:15
Date Received: 10/25/18 09:24

Lab Sample ID: 680-159889-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 14:58	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/05/18 14:58	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 14:58	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/05/18 14:58	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 14:58	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/05/18 14:58	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 14:58	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 14:58	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/05/18 14:58	1
Acetone	10	U	10	10	7.0	ug/L		11/05/18 14:58	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/05/18 14:58	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 14:58	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 14:58	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/05/18 14:58	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 14:58	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/05/18 14:58	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 14:58	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/05/18 14:58	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 14:58	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 14:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/05/18 14:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 14:58	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 14:58	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 14:58	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/05/18 14:58	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 14:58	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 14:58	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 14:58	1
Methyl tert-butyl ether	**0.42**	**J**	10	0.50	0.30	ug/L		11/05/18 14:58	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 14:58	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 14:58	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 14:58	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 14:58	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/05/18 14:58	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 14:58	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 14:58	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 14:58	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/05/18 14:58	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 14:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 14:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 14:58	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 14:58	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 14:58	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/05/18 14:58	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 14:58	1

Client Sample ID: G6M-18-02-GW-94-98

Lab Sample ID: 680-159889-2

Date Collected: 10/23/18 09:15

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/05/18 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/05/18 14:58*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/05/18 14:58*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/05/18 14:58*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*11/05/18 14:58*	*1*

Client Sample ID: G6M-18-02-GW-104-108

Lab Sample ID: 680-159889-3

Date Collected: 10/23/18 10:45

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:15	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 16:15	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:15	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 16:15	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 16:15	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 16:15	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 16:15	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 16:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 16:15	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:15	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 16:15	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 16:15	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 16:15	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 16:15	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 16:15	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 16:15	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 16:15	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:15	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 16:15	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 16:15	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 16:15	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:15	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:15	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 16:15	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 16:15	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 16:15	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:15	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 16:15	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 16:15	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:15	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 16:15	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:15	1

Client Sample ID: G6M-18-02-GW-104-108

Lab Sample ID: 680-159889-3

Date Collected: 10/23/18 10:45

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 16:15	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:15	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 16:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 16:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 16:15	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:15	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 16:15	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 16:15	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:15	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 16:15	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:15	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 16:15	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:15	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:15	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 16:15	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 16:15	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 16:15	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:15	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 16:15	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:15	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 16:15	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:15	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:15	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:15	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 16:15	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:15	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 16:15*	*1*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*		*11/02/18 16:15*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/02/18 16:15*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/02/18 16:15*	*1*

Client Sample ID: G6M-18-02-GW-114-118

Lab Sample ID: 680-159889-4

Date Collected: 10/23/18 12:05

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:40	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 16:40	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:40	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 16:40	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Client Sample ID: G6M-18-02-GW-114-118
Date Collected: 10/23/18 12:05
Date Received: 10/25/18 09:24

Lab Sample ID: 680-159889-4
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 16:40	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 16:40	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 16:40	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 16:40	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 16:40	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:40	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 16:40	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 16:40	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 16:40	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 16:40	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 16:40	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 16:40	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 16:40	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:40	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 16:40	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 16:40	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 16:40	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:40	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:40	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 16:40	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 16:40	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 16:40	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:40	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 16:40	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 16:40	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:40	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 16:40	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:40	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 16:40	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:40	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 16:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 16:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 16:40	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:40	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 16:40	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 16:40	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 16:40	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 16:40	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:40	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 16:40	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 16:40	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 16:40	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 16:40	1

Client Sample ID: G6M-18-02-GW-114-118

Lab Sample ID: 680-159889-4

Date Collected: 10/23/18 12:05

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 16:40	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 16:40	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:40	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 16:40	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 16:40	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 16:40	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 16:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:40	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 16:40	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 16:40	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 16:40	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 16:40	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 16:40*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/02/18 16:40*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*11/02/18 16:40*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/02/18 16:40*	*1*

Client Sample ID: G6M-18-02-GW-FD-2

Lab Sample ID: 680-159889-5

Date Collected: 10/23/18 12:05

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 17:05	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 17:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 17:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 17:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 17:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 17:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 17:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 17:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 17:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 17:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 17:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 17:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 17:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 17:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 17:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 17:05	1

Client Sample ID: G6M-18-02-GW-FD-2
Date Collected: 10/23/18 12:05
Date Received: 10/25/18 09:24

Lab Sample ID: 680-159889-5
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 17:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:05	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 17:05	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 17:05	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 17:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 17:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 17:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 17:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 17:05	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 17:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 17:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 17:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 17:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 17:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 17:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 17:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 17:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 17:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 17:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 17:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:05	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 17:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:05	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:05	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 17:05	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*		*11/02/18 17:05*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/02/18 17:05*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 119*		*11/02/18 17:05*	*1*

Client Sample ID: G6M-18-02-GW-FD-2

Lab Sample ID: 680-159889-5

Date Collected: 10/23/18 12:05

Matrix: Water

Date Received: 10/25/18 09:24

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/02/18 17:05*	*1*

Client Sample ID: G6M-18-02-GW-124-128

Lab Sample ID: 680-159889-6

Date Collected: 10/23/18 12:45

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:30	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 17:30	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:30	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 17:30	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 17:30	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 17:30	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 17:30	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 17:30	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 17:30	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:30	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 17:30	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 17:30	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 17:30	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 17:30	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 17:30	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 17:30	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 17:30	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:30	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 17:30	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 17:30	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 17:30	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:30	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:30	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 17:30	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 17:30	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 17:30	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:30	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 17:30	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 17:30	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:30	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 17:30	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:30	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 17:30	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:30	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 17:30	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 17:30	1

Client Sample ID: G6M-18-02-GW-124-128

Lab Sample ID: 680-159889-6

Date Collected: 10/23/18 12:45

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 17:30	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:30	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 17:30	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 17:30	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 17:30	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 17:30	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:30	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 17:30	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 17:30	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 17:30	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 17:30	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 17:30	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 17:30	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:30	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 17:30	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 17:30	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 17:30	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 17:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:30	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 17:30	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 17:30	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 17:30	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 17:30	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*		*11/02/18 17:30*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 17:30*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*11/02/18 17:30*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*11/02/18 17:30*	*1*

Client Sample ID: G6M-EB02

Lab Sample ID: 680-159889-7

Date Collected: 10/23/18 16:30

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 15:20	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 15:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/05/18 15:20	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 15:20	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 15:20	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/05/18 15:20	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 15:20	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/05/18 15:20	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Client Sample ID: G6M-EB02
Date Collected: 10/23/18 16:30
Date Received: 10/25/18 09:24

Lab Sample ID: 680-159889-7
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 15:20	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/05/18 15:20	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 15:20	1
1,2-Dichloroethane	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 15:20	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/05/18 15:20	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/05/18 15:20	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/05/18 15:20	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 15:20	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 15:20	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/05/18 15:20	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 15:20	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/05/18 15:20	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 15:20	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/05/18 15:20	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 15:20	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 15:20	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/05/18 15:20	1
Acetone	10	U	10	10	7.0	ug/L		11/05/18 15:20	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/05/18 15:20	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 15:20	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 15:20	1
Bromomethane	5.0	U Q	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/05/18 15:20	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 15:20	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/05/18 15:20	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 15:20	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/05/18 15:20	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 15:20	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 15:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/05/18 15:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 15:20	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 15:20	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 15:20	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/05/18 15:20	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 15:20	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 15:20	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 15:20	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/05/18 15:20	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 15:20	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 15:20	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 15:20	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 15:20	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/05/18 15:20	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 15:20	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 15:20	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 15:20	1

Client Sample ID: G6M-EB02

Lab Sample ID: 680-159889-7

Date Collected: 10/23/18 16:30

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/05/18 15:20	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 15:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 15:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 15:20	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 15:20	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 15:20	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/05/18 15:20	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 15:20	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/05/18 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/05/18 15:20*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/05/18 15:20*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*11/05/18 15:20*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*11/05/18 15:20*	*1*

Client Sample ID: TB-01

Lab Sample ID: 680-159889-8

Date Collected: 10/22/18 00:00

Matrix: Water

Date Received: 10/25/18 09:24

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:54	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 10:54	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:54	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:54	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 10:54	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:54	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 10:54	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:54	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 10:54	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:54	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 10:54	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 10:54	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 10:54	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 10:54	1
1,3-Dichlorobenzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 10:54	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:54	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 10:54	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:54	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 10:54	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:54	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 10:54	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:54	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:54	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 10:54	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 10:54	1

Client Sample ID: TB-01
Date Collected: 10/22/18 00:00
Date Received: 10/25/18 09:24

Lab Sample ID: 680-159889-8
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/02/18 10:54	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:54	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:54	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 10:54	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:54	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 10:54	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:54	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 10:54	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
Chloroform	**3.0**		1.0	1.0	0.50	ug/L		11/02/18 10:54	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 10:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:54	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:54	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:54	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 10:54	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:54	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:54	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:54	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 10:54	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:54	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:54	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:54	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:54	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 10:54	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:54	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:54	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:54	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 10:54	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:54	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:54	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:54	1
Vinyl acetate	2.0	U Q	2.0	2.0	0.81	ug/L		11/02/18 10:54	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:54	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 10:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 10:54*	*1*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*		*11/02/18 10:54*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 119*		*11/02/18 10:54*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*11/02/18 10:54*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159889-1	G6M-18-02-GW-84-88	83	98	90	94
680-159889-2	G6M-18-02-GW-94-98	93	101	94	95
680-159889-2 MS	G6M-18-02-GW-94-98	85	98	94	97
680-159889-2 MSD	G6M-18-02-GW-94-98	83	100	92	96
680-159889-3	G6M-18-02-GW-104-108	82	100	90	96
680-159889-4	G6M-18-02-GW-114-118	82	99	91	96
680-159889-5	G6M-18-02-GW-FD-2	83	98	92	96
680-159889-6	G6M-18-02-GW-124-128	84	101	91	96
680-159889-7	G6M-EB02	93	102	94	94
680-159889-8	TB-01	82	99	90	95
LCS 680-545954/4	Lab Control Sample	85	100	94	95
LCS 680-546210/4	Lab Control Sample	93	95	100	102
LCSD 680-545954/5	Lab Control Sample Dup	84	99	94	95
LCSD 680-546210/5	Lab Control Sample Dup	98	94	104	105
MB 680-545954/9	Method Blank	82	101	91	95
MB 680-546210/9	Method Blank	93	101	99	97

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

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

Lab Sample ID: MB 680-545954/9
Matrix: Water
Analysis Batch: 545954

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/02/18 10:05	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:05	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/02/18 10:05	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:05	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/02/18 10:05	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:05	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/02/18 10:05	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/02/18 10:05	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/02/18 10:05	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/02/18 10:05	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/02/18 10:05	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/02/18 10:05	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/02/18 10:05	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:05	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/02/18 10:05	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/02/18 10:05	1
Acetone	10	U	10	10	7.0	ug/L		11/02/18 10:05	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/02/18 10:05	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/02/18 10:05	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/02/18 10:05	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/02/18 10:05	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/02/18 10:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/02/18 10:05	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:05	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/02/18 10:05	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/02/18 10:05	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/02/18 10:05	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1

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

Lab Sample ID: MB 680-545954/9
Matrix: Water
Analysis Batch: 545954

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/02/18 10:05	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/02/18 10:05	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/02/18 10:05	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/02/18 10:05	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/02/18 10:05	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/02/18 10:05	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/02/18 10:05	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/02/18 10:05	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/02/18 10:05	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/02/18 10:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/02/18 10:05	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/02/18 10:05	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/02/18 10:05	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/02/18 10:05	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/02/18 10:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*81 - 118*		*11/02/18 10:05*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/02/18 10:05*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*11/02/18 10:05*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*11/02/18 10:05*	*1*

Lab Sample ID: LCS 680-545954/4
Matrix: Water
Analysis Batch: 545954

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	50.2		ug/L		100	78 - 124
1,1,1-Trichloroethane	50.0	46.4		ug/L		93	74 - 131
1,1,2,2-Tetrachloroethane	50.0	53.8		ug/L		108	71 - 121
1,1,2-Trichloroethane	50.0	52.7		ug/L		105	80 - 119
1,1-Dichloroethane	50.0	51.2		ug/L		102	77 - 125
1,1-Dichloroethene	50.0	50.0		ug/L		100	71 - 131
1,1-Dichloropropene	50.0	49.8		ug/L		100	79 - 125
1,2,3-Trichlorobenzene	50.0	52.3		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	53.2		ug/L		106	73 - 122
1,2,4-Trichlorobenzene	50.0	53.3		ug/L		107	69 - 130
1,2,4-Trimethylbenzene	50.0	50.7		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	50.7		ug/L		101	62 - 128
1,2-Dichlorobenzene	50.0	49.5		ug/L		99	80 - 119
1,2-Dichloroethane	50.0	46.3		ug/L		93	73 - 128
1,2-Dichloroethene, Total	100	101		ug/L		101	79 - 121
1,2-Dichloropropane	50.0	55.2		ug/L		110	78 - 122

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

Lab Sample ID: LCS 680-545954/4
Matrix: Water
Analysis Batch: 545954

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	51.2		ug/L		102	75 - 124
1,3-Dichlorobenzene	50.0	49.2		ug/L		98	80 - 119
1,3-Dichloropropane	50.0	51.8		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	49.9		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	54.8		ug/L		110	60 - 139
2-Butanone (MEK)	250	273		ug/L		109	56 - 143
2-Chlorotoluene	50.0	50.5		ug/L		101	79 - 122
2-Hexanone	250	278		ug/L		111	57 - 139
4-Chlorotoluene	50.0	51.4		ug/L		103	78 - 122
4-Isopropyltoluene	50.0	50.6		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	250	278		ug/L		111	67 - 130
Acetone	250	279		ug/L		112	39 - 160
Benzene	50.0	50.4		ug/L		101	79 - 120
Bromobenzene	50.0	50.2		ug/L		100	80 - 120
Bromoform	50.0	54.2		ug/L		108	66 - 130
Bromomethane	50.0	41.1		ug/L		82	53 - 141
Carbon disulfide	50.0	49.6		ug/L		99	64 - 133
Carbon tetrachloride	50.0	47.1		ug/L		94	72 - 136
Chlorobenzene	50.0	48.7		ug/L		97	82 - 118
Chlorobromomethane	50.0	45.8		ug/L		92	78 - 123
Chlorodibromomethane	50.0	47.3		ug/L		95	74 - 126
Chloroethane	50.0	47.0		ug/L		94	60 - 138
Chloroform	50.0	47.9		ug/L		96	79 - 124
Chloromethane	50.0	49.3		ug/L		99	50 - 139
cis-1,2-Dichloroethene	50.0	51.9		ug/L		104	78 - 123
cis-1,3-Dichloropropene	50.0	54.8		ug/L		110	75 - 124
Dibromomethane	50.0	48.6		ug/L		97	79 - 123
Dichlorobromomethane	50.0	49.5		ug/L		99	79 - 125
Dichlorodifluoromethane	50.0	41.3		ug/L		83	32 - 152
Ethylbenzene	50.0	50.6		ug/L		101	79 - 121
Ethylene Dibromide	50.0	51.2		ug/L		102	75 - 127
Hexachlorobutadiene	50.0	50.9		ug/L		102	66 - 134
Isopropylbenzene	50.0	50.3		ug/L		101	72 - 131
Methyl tert-butyl ether	50.0	49.6		ug/L		99	71 - 124
Methylene Chloride	50.0	50.8		ug/L		102	74 - 124
m-Xylene & p-Xylene	50.0	50.4		ug/L		101	80 - 121
Naphthalene	50.0	53.3		ug/L		107	61 - 128
n-Butylbenzene	50.0	52.0		ug/L		104	75 - 128
N-Propylbenzene	50.0	51.5		ug/L		103	76 - 126
o-Xylene	50.0	51.0		ug/L		102	78 - 122
sec-Butylbenzene	50.0	50.9		ug/L		102	77 - 126
Styrene	50.0	53.1		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.5		ug/L		101	78 - 124
Tetrachloroethene	50.0	49.2		ug/L		98	74 - 129
Toluene	50.0	51.6		ug/L		103	80 - 121
trans-1,2-Dichloroethene	50.0	49.5		ug/L		99	75 - 124
trans-1,3-Dichloropropene	50.0	54.2		ug/L		108	73 - 127
Trichloroethene	50.0	47.8		ug/L		96	79 - 123

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

Lab Sample ID: LCS 680-545954/4
Matrix: Water
Analysis Batch: 545954

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	44.8		ug/L		90	65 - 141
Vinyl acetate	100	137		ug/L		137	54 - 146
Vinyl chloride	50.0	53.2		ug/L		106	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

Lab Sample ID: LCSD 680-545954/5
Matrix: Water
Analysis Batch: 545954

Client Sample 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	49.8		ug/L		100	78 - 124	1	20
1,1,1-Trichloroethane	50.0	47.0		ug/L		94	74 - 131	1	20
1,1,2,2-Tetrachloroethane	50.0	52.2		ug/L		104	71 - 121	3	20
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	80 - 119	3	20
1,1-Dichloroethane	50.0	51.5		ug/L		103	77 - 125	1	20
1,1-Dichloroethene	50.0	50.8		ug/L		102	71 - 131	2	20
1,1-Dichloropropene	50.0	50.2		ug/L		100	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	53.3		ug/L		107	69 - 129	2	20
1,2,3-Trichloropropane	50.0	50.6		ug/L		101	73 - 122	5	20
1,2,4-Trichlorobenzene	50.0	53.5		ug/L		107	69 - 130	0	20
1,2,4-Trimethylbenzene	50.0	52.1		ug/L		104	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	50.0	52.4		ug/L		105	62 - 128	3	20
1,2-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119	1	20
1,2-Dichloroethane	50.0	45.7		ug/L		91	73 - 128	1	20
1,2-Dichloroethene, Total	100	102		ug/L		102	79 - 121	1	20
1,2-Dichloropropane	50.0	55.0		ug/L		110	78 - 122	0	20
1,3,5-Trimethylbenzene	50.0	52.3		ug/L		105	75 - 124	2	20
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	80 - 119	3	20
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 119	3	20
1,4-Dichlorobenzene	50.0	50.4		ug/L		101	79 - 118	1	20
2,2-Dichloropropane	50.0	55.1		ug/L		110	60 - 139	1	20
2-Butanone (MEK)	250	262		ug/L		105	56 - 143	4	20
2-Chlorotoluene	50.0	51.2		ug/L		102	79 - 122	1	20
2-Hexanone	250	273		ug/L		109	57 - 139	2	20
4-Chlorotoluene	50.0	52.5		ug/L		105	78 - 122	2	20
4-Isopropyltoluene	50.0	52.5		ug/L		105	77 - 127	4	20
4-Methyl-2-pentanone (MIBK)	250	275		ug/L		110	67 - 130	1	20
Acetone	250	274		ug/L		110	39 - 160	2	20
Benzene	50.0	50.5		ug/L		101	79 - 120	0	20
Bromobenzene	50.0	49.5		ug/L		99	80 - 120	1	20
Bromoform	50.0	52.7		ug/L		105	66 - 130	3	20
Bromomethane	50.0	43.1		ug/L		86	53 - 141	5	20

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

Lab Sample ID: LCSD 680-545954/5
Matrix: Water
Analysis Batch: 545954

Client Sample 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 disulfide			50.0	50.7		ug/L		101	64 - 133	2	20
Carbon tetrachloride			50.0	47.3		ug/L		95	72 - 136	0	20
Chlorobenzene			50.0	48.8		ug/L		98	82 - 118	0	20
Chlorobromomethane			50.0	46.0		ug/L		92	78 - 123	1	20
Chlorodibromomethane			50.0	46.7		ug/L		93	74 - 126	1	20
Chloroethane			50.0	48.4		ug/L		97	60 - 138	3	20
Chloroform			50.0	47.8		ug/L		96	79 - 124	0	20
Chloromethane			50.0	51.8		ug/L		104	50 - 139	5	20
cis-1,2-Dichloroethene			50.0	51.5		ug/L		103	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	53.5		ug/L		107	75 - 124	2	20
Dibromomethane			50.0	47.5		ug/L		95	79 - 123	2	20
Dichlorobromomethane			50.0	48.5		ug/L		97	79 - 125	2	20
Dichlorodifluoromethane			50.0	43.1		ug/L		86	32 - 152	4	20
Ethylbenzene			50.0	50.4		ug/L		101	79 - 121	0	20
Ethylene Dibromide			50.0	49.8		ug/L		100	75 - 127	3	20
Hexachlorobutadiene			50.0	52.7		ug/L		105	66 - 134	4	20
Isopropylbenzene			50.0	51.0		ug/L		102	72 - 131	1	20
Methyl tert-butyl ether			50.0	48.9		ug/L		98	71 - 124	1	20
Methylene Chloride			50.0	50.3		ug/L		101	74 - 124	1	20
m-Xylene & p-Xylene			50.0	51.0		ug/L		102	80 - 121	1	20
Naphthalene			50.0	53.6		ug/L		107	61 - 128	1	20
n-Butylbenzene			50.0	52.9		ug/L		106	75 - 128	2	20
N-Propylbenzene			50.0	52.5		ug/L		105	76 - 126	2	20
o-Xylene			50.0	51.0		ug/L		102	78 - 122	0	20
sec-Butylbenzene			50.0	51.9		ug/L		104	77 - 126	2	20
Styrene			50.0	52.8		ug/L		106	78 - 123	1	20
tert-Butylbenzene			50.0	52.1		ug/L		104	78 - 124	3	20
Tetrachloroethene			50.0	50.6		ug/L		101	74 - 129	3	20
Toluene			50.0	51.6		ug/L		103	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	50.4		ug/L		101	75 - 124	2	20
trans-1,3-Dichloropropene			50.0	53.4		ug/L		107	73 - 127	1	20
Trichloroethene			50.0	47.5		ug/L		95	79 - 123	1	20
Trichlorofluoromethane			50.0	45.5		ug/L		91	65 - 141	2	20
Vinyl acetate			100	133		ug/L		133	54 - 146	3	20
Vinyl chloride			50.0	55.6		ug/L		111	58 - 137	4	20
Xylenes, Total			100	102		ug/L		102	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*95*		*89 - 112*

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

Lab Sample ID: 680-159889-2 MS
Matrix: Water
Analysis Batch: 545954

Client Sample ID: G6M-18-02-GW-94-98
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	1.0	U	50.0	50.1		ug/L		100	78 - 124
1,1,1-Trichloroethane	1.0	U	50.0	47.7		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	1.0	U	50.0	54.1		ug/L		108	71 - 121
1,1,2-Trichloroethane	0.50	U	50.0	51.1		ug/L		102	80 - 119
1,1-Dichloroethane	1.0	U	50.0	52.0		ug/L		104	77 - 125
1,1-Dichloroethene	1.0	U	50.0	52.7		ug/L		105	71 - 131
1,1-Dichloropropene	1.0	U	50.0	52.0		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	5.0	U	50.0	50.8		ug/L		102	69 - 129
1,2,3-Trichloropropane	1.0	U	50.0	51.5		ug/L		103	73 - 122
1,2,4-Trichlorobenzene	5.0	U	50.0	51.5		ug/L		103	69 - 130
1,2,4-Trimethylbenzene	1.0	U	50.0	52.7		ug/L		105	76 - 124
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	52.6		ug/L		105	62 - 128
1,2-Dichlorobenzene	1.0	U	50.0	49.5		ug/L		99	80 - 119
1,2-Dichloroethane	1.0	U	50.0	45.7		ug/L		91	73 - 128
1,2-Dichloroethene, Total	1.0	U	100	104		ug/L		104	79 - 121
1,2-Dichloropropane	1.0	U	50.0	53.6		ug/L		107	78 - 122
1,3,5-Trimethylbenzene	0.50	U	50.0	53.3		ug/L		107	75 - 124
1,3-Dichlorobenzene	1.0	U	50.0	49.4		ug/L		99	80 - 119
1,3-Dichloropropane	1.0	U	50.0	50.2		ug/L		100	80 - 119
1,4-Dichlorobenzene	1.0	U	50.0	49.1		ug/L		98	79 - 118
2,2-Dichloropropane	1.0	U	50.0	49.8		ug/L		100	60 - 139
2-Butanone (MEK)	10	U	250	262		ug/L		105	56 - 143
2-Chlorotoluene	0.50	U	50.0	52.1		ug/L		104	79 - 122
2-Hexanone	5.0	U	250	273		ug/L		109	57 - 139
4-Chlorotoluene	1.0	U	50.0	52.9		ug/L		106	78 - 122
4-Isopropyltoluene	1.0	U	50.0	53.1		ug/L		106	77 - 127
4-Methyl-2-pentanone (MIBK)	5.0	U	250	274		ug/L		110	67 - 130
Acetone	10	U	250	271		ug/L		108	39 - 160
Benzene	1.0	U M	50.0	50.7		ug/L		101	79 - 120
Bromobenzene	1.0	U	50.0	50.1		ug/L		100	80 - 120
Bromoform	1.0	U	50.0	52.2		ug/L		104	66 - 130
Bromomethane	5.0	U Q	50.0	37.2		ug/L		74	53 - 141
Carbon disulfide	2.0	U	50.0	52.5		ug/L		105	64 - 133
Carbon tetrachloride	0.50	U	50.0	48.9		ug/L		98	72 - 136
Chlorobenzene	0.50	U	50.0	49.4		ug/L		99	82 - 118
Chlorobromomethane	1.0	U	50.0	46.6		ug/L		93	78 - 123
Chlorodibromomethane	0.50	U	50.0	45.3		ug/L		91	74 - 126
Chloroethane	5.0	U	50.0	50.6		ug/L		101	60 - 138
Chloroform	1.0	U	50.0	48.6		ug/L		97	79 - 124
Chloromethane	1.0	U	50.0	56.7		ug/L		113	50 - 139
cis-1,2-Dichloroethene	1.0	U	50.0	51.8		ug/L		104	78 - 123
cis-1,3-Dichloropropene	1.0	U	50.0	51.8		ug/L		104	75 - 124
Dibromomethane	1.0	U	50.0	48.0		ug/L		96	79 - 123
Dichlorobromomethane	1.0	U	50.0	48.0		ug/L		96	79 - 125
Dichlorodifluoromethane	1.0	U	50.0	50.0		ug/L		100	32 - 152
Ethylbenzene	0.50	U	50.0	51.2		ug/L		102	79 - 121
Ethylene Dibromide	1.0	U	50.0	49.2		ug/L		98	75 - 127
Hexachlorobutadiene	5.0	U	50.0	51.5		ug/L		103	66 - 134

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

Lab Sample ID: 680-159889-2 MS
Matrix: Water
Analysis Batch: 545954

Client Sample ID: G6M-18-02-GW-94-98
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	1.0	U	50.0	52.1		ug/L		104	72 - 131
Methyl tert-butyl ether	0.42	J	50.0	49.1		ug/L		97	71 - 124
Methylene Chloride	5.0	U	50.0	49.7		ug/L		99	74 - 124
m-Xylene & p-Xylene	1.0	U	50.0	51.8		ug/L		104	80 - 121
Naphthalene	5.0	U	50.0	50.4		ug/L		101	61 - 128
n-Butylbenzene	1.0	U	50.0	52.6		ug/L		105	75 - 128
N-Propylbenzene	1.0	U	50.0	53.7		ug/L		107	76 - 126
o-Xylene	0.50	U	50.0	51.5		ug/L		103	78 - 122
sec-Butylbenzene	1.0	U	50.0	53.1		ug/L		106	77 - 126
Styrene	0.50	U	50.0	52.9		ug/L		106	78 - 123
tert-Butylbenzene	1.0	U	50.0	53.3		ug/L		107	78 - 124
Tetrachloroethene	1.0	U	50.0	51.0		ug/L		102	74 - 129
Toluene	1.0	U	50.0	51.8		ug/L		104	80 - 121
trans-1,2-Dichloroethene	1.0	U	50.0	52.1		ug/L		104	75 - 124
trans-1,3-Dichloropropene	1.0	U	50.0	51.2		ug/L		102	73 - 127
Trichloroethene	1.0	U	50.0	48.2		ug/L		96	79 - 123
Trichlorofluoromethane	1.0	U	50.0	48.2		ug/L		96	65 - 141
Vinyl acetate	2.0	U	100	126		ug/L		126	54 - 146
Vinyl chloride	1.0	U	50.0	58.6		ug/L		117	58 - 137
Xylenes, Total	0.50	U	100	103		ug/L		103	79 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*85*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*94*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

Lab Sample ID: 680-159889-2 MSD
Matrix: Water
Analysis Batch: 545954

Client Sample ID: G6M-18-02-GW-94-98
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	1.0	U	50.0	50.0		ug/L		100	78 - 124	0	20
1,1,1-Trichloroethane	1.0	U	50.0	46.6		ug/L		93	74 - 131	2	20
1,1,2,2-Tetrachloroethane	1.0	U	50.0	53.3		ug/L		107	71 - 121	1	20
1,1,2-Trichloroethane	0.50	U	50.0	50.9		ug/L		102	80 - 119	0	20
1,1-Dichloroethane	1.0	U	50.0	51.0		ug/L		102	77 - 125	2	20
1,1-Dichloroethene	1.0	U	50.0	51.3		ug/L		103	71 - 131	3	20
1,1-Dichloropropene	1.0	U	50.0	50.7		ug/L		101	79 - 125	3	20
1,2,3-Trichlorobenzene	5.0	U	50.0	52.4		ug/L		105	69 - 129	3	20
1,2,3-Trichloropropane	1.0	U	50.0	51.0		ug/L		102	73 - 122	1	20
1,2,4-Trichlorobenzene	5.0	U	50.0	52.5		ug/L		105	69 - 130	2	20
1,2,4-Trimethylbenzene	1.0	U	50.0	51.0		ug/L		102	76 - 124	3	20
1,2-Dibromo-3-Chloropropane	2.0	U	50.0	52.1		ug/L		104	62 - 128	1	20
1,2-Dichlorobenzene	1.0	U	50.0	50.1		ug/L		100	80 - 119	1	20
1,2-Dichloroethane	1.0	U	50.0	45.2		ug/L		90	73 - 128	1	20
1,2-Dichloroethene, Total	1.0	U	100	100		ug/L		100	79 - 121	4	20
1,2-Dichloropropane	1.0	U	50.0	53.4		ug/L		107	78 - 122	0	20

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

Lab Sample ID: 680-159889-2 MSD
Matrix: Water
Analysis Batch: 545954

Client Sample ID: G6M-18-02-GW-94-98
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	0.50	U	50.0	52.1		ug/L		104	75 - 124	2	20
1,3-Dichlorobenzene	1.0	U	50.0	49.8		ug/L		100	80 - 119	1	20
1,3-Dichloropropane	1.0	U	50.0	50.4		ug/L		101	80 - 119	0	20
1,4-Dichlorobenzene	1.0	U	50.0	50.3		ug/L		101	79 - 118	2	20
2,2-Dichloropropane	1.0	U	50.0	48.9		ug/L		98	60 - 139	2	20
2-Butanone (MEK)	10	U	250	262		ug/L		105	56 - 143	0	20
2-Chlorotoluene	0.50	U	50.0	51.2		ug/L		102	79 - 122	2	20
2-Hexanone	5.0	U	250	267		ug/L		107	57 - 139	2	20
4-Chlorotoluene	1.0	U	50.0	51.7		ug/L		103	78 - 122	2	20
4-Isopropyltoluene	1.0	U	50.0	52.5		ug/L		105	77 - 127	1	20
4-Methyl-2-pentanone (MIBK)	5.0	U	250	268		ug/L		107	67 - 130	3	20
Acetone	10	U	250	263		ug/L		105	39 - 160	3	20
Benzene	1.0	U M	50.0	50.2		ug/L		100	79 - 120	1	20
Bromobenzene	1.0	U	50.0	50.3		ug/L		101	80 - 120	0	20
Bromoform	1.0	U	50.0	53.1		ug/L		106	66 - 130	2	20
Bromomethane	5.0	U Q	50.0	37.8		ug/L		76	53 - 141	2	20
Carbon disulfide	2.0	U	50.0	50.4		ug/L		101	64 - 133	4	20
Carbon tetrachloride	0.50	U	50.0	47.9		ug/L		96	72 - 136	2	20
Chlorobenzene	0.50	U	50.0	49.6		ug/L		99	82 - 118	0	20
Chlorobromomethane	1.0	U	50.0	45.4		ug/L		91	78 - 123	3	20
Chlorodibromomethane	0.50	U	50.0	45.9		ug/L		92	74 - 126	1	20
Chloroethane	5.0	U	50.0	48.9		ug/L		98	60 - 138	3	20
Chloroform	1.0	U	50.0	46.7		ug/L		93	79 - 124	4	20
Chloromethane	1.0	U	50.0	54.1		ug/L		108	50 - 139	5	20
cis-1,2-Dichloroethene	1.0	U	50.0	50.1		ug/L		100	78 - 123	3	20
cis-1,3-Dichloropropene	1.0	U	50.0	52.1		ug/L		104	75 - 124	0	20
Dibromomethane	1.0	U	50.0	47.4		ug/L		95	79 - 123	1	20
Dichlorobromomethane	1.0	U	50.0	47.7		ug/L		95	79 - 125	1	20
Dichlorodifluoromethane	1.0	U	50.0	48.9		ug/L		98	32 - 152	2	20
Ethylbenzene	0.50	U	50.0	51.1		ug/L		102	79 - 121	0	20
Ethylene Dibromide	1.0	U	50.0	49.5		ug/L		99	75 - 127	1	20
Hexachlorobutadiene	5.0	U	50.0	52.0		ug/L		104	66 - 134	1	20
Isopropylbenzene	1.0	U	50.0	51.7		ug/L		103	72 - 131	1	20
Methyl tert-butyl ether	0.42	J	50.0	48.7		ug/L		97	71 - 124	1	20
Methylene Chloride	5.0	U	50.0	48.1		ug/L		96	74 - 124	3	20
m-Xylene & p-Xylene	1.0	U	50.0	51.2		ug/L		102	80 - 121	1	20
Naphthalene	5.0	U	50.0	52.4		ug/L		105	61 - 128	4	20
n-Butylbenzene	1.0	U	50.0	52.3		ug/L		105	75 - 128	1	20
N-Propylbenzene	1.0	U	50.0	52.6		ug/L		105	76 - 126	2	20
o-Xylene	0.50	U	50.0	50.9		ug/L		102	78 - 122	1	20
sec-Butylbenzene	1.0	U	50.0	52.2		ug/L		104	77 - 126	2	20
Styrene	0.50	U	50.0	52.7		ug/L		105	78 - 123	0	20
tert-Butylbenzene	1.0	U	50.0	52.0		ug/L		104	78 - 124	2	20
Tetrachloroethene	1.0	U	50.0	50.3		ug/L		101	74 - 129	1	20
Toluene	1.0	U	50.0	51.2		ug/L		102	80 - 121	1	20
trans-1,2-Dichloroethene	1.0	U	50.0	50.0		ug/L		100	75 - 124	4	20
trans-1,3-Dichloropropene	1.0	U	50.0	51.1		ug/L		102	73 - 127	0	20
Trichloroethene	1.0	U	50.0	47.9		ug/L		96	79 - 123	0	20

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

Lab Sample ID: 680-159889-2 MSD
Matrix: Water
Analysis Batch: 545954

Client Sample ID: G6M-18-02-GW-94-98
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	1.0	U	50.0	46.2		ug/L		92	65 - 141	4	20
Vinyl acetate	2.0	U	100	124		ug/L		124	54 - 146	1	20
Vinyl chloride	1.0	U	50.0	57.1		ug/L		114	58 - 137	3	20
Xylenes, Total	0.50	U	100	102		ug/L		102	79 - 121	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*81 - 118*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*
Toluene-d8 (Surr)	*96*		*89 - 112*

Lab Sample ID: MB 680-546210/9
Matrix: Water
Analysis Batch: 546210

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 11:43	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 11:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/05/18 11:43	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 11:43	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 11:43	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/05/18 11:43	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 11:43	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/05/18 11:43	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 11:43	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/05/18 11:43	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 11:43	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/05/18 11:43	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/05/18 11:43	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/05/18 11:43	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/05/18 11:43	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 11:43	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/05/18 11:43	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/05/18 11:43	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 11:43	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/05/18 11:43	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 11:43	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/05/18 11:43	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 11:43	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 11:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/05/18 11:43	1
Acetone	10	U	10	10	7.0	ug/L		11/05/18 11:43	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 11:43	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 11:43	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/05/18 11:43	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1

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

Lab Sample ID: MB 680-546210/9
Matrix: Water
Analysis Batch: 546210

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/05/18 11:43	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 11:43	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/05/18 11:43	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 11:43	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/05/18 11:43	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 11:43	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 11:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/05/18 11:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/05/18 11:43	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 11:43	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 11:43	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/05/18 11:43	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/05/18 11:43	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/05/18 11:43	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 11:43	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/05/18 11:43	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/05/18 11:43	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/05/18 11:43	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/05/18 11:43	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/05/18 11:43	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/05/18 11:43	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 11:43	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/05/18 11:43	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/05/18 11:43	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/05/18 11:43	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 11:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/05/18 11:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 11:43	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/05/18 11:43	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/05/18 11:43	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/05/18 11:43	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/05/18 11:43	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/05/18 11:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*11/05/18 11:43*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*11/05/18 11:43*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 119*		*11/05/18 11:43*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/05/18 11:43*	*1*

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

Lab Sample ID: LCS 680-546210/4
Matrix: Water
Analysis Batch: 546210

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	50.8		ug/L		102	78 - 124
1,1,1-Trichloroethane	50.0	47.6		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	49.1		ug/L		98	71 - 121
1,1,2-Trichloroethane	50.0	49.7		ug/L		99	80 - 119
1,1-Dichloroethane	50.0	46.5		ug/L		93	77 - 125
1,1-Dichloroethene	50.0	45.5		ug/L		91	71 - 131
1,1-Dichloropropene	50.0	48.0		ug/L		96	79 - 125
1,2,3-Trichlorobenzene	50.0	46.3		ug/L		93	69 - 129
1,2,3-Trichloropropane	50.0	49.1		ug/L		98	73 - 122
1,2,4-Trichlorobenzene	50.0	46.9		ug/L		94	69 - 130
1,2,4-Trimethylbenzene	50.0	52.5		ug/L		105	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	46.4		ug/L		93	62 - 128
1,2-Dichlorobenzene	50.0	50.5		ug/L		101	80 - 119
1,2-Dichloroethane	50.0	48.6		ug/L		97	73 - 128
1,2-Dichloroethene, Total	100	93.4		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	48.2		ug/L		96	78 - 122
1,3,5-Trimethylbenzene	50.0	51.9		ug/L		104	75 - 124
1,3-Dichlorobenzene	50.0	50.1		ug/L		100	80 - 119
1,3-Dichloropropane	50.0	48.5		ug/L		97	80 - 119
1,4-Dichlorobenzene	50.0	50.0		ug/L		100	79 - 118
2,2-Dichloropropane	50.0	47.1		ug/L		94	60 - 139
2-Butanone (MEK)	250	217		ug/L		87	56 - 143
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122
2-Hexanone	250	224		ug/L		89	57 - 139
4-Chlorotoluene	50.0	52.7		ug/L		105	78 - 122
4-Isopropyltoluene	50.0	50.6		ug/L		101	77 - 127
4-Methyl-2-pentanone (MIBK)	250	226		ug/L		90	67 - 130
Acetone	250	213		ug/L		85	39 - 160
Benzene	50.0	48.5		ug/L		97	79 - 120
Bromobenzene	50.0	52.8		ug/L		106	80 - 120
Bromoform	50.0	48.1		ug/L		96	66 - 130
Bromomethane	50.0	74.8	Q	ug/L		150	53 - 141
Carbon disulfide	50.0	43.7		ug/L		87	64 - 133
Carbon tetrachloride	50.0	46.7		ug/L		93	72 - 136
Chlorobenzene	50.0	51.9		ug/L		104	82 - 118
Chlorobromomethane	50.0	47.3		ug/L		95	78 - 123
Chlorodibromomethane	50.0	48.7		ug/L		97	74 - 126
Chloroethane	50.0	32.8		ug/L		66	60 - 138
Chloroform	50.0	47.5		ug/L		95	79 - 124
Chloromethane	50.0	37.5		ug/L		75	50 - 139
cis-1,2-Dichloroethene	50.0	47.8		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	48.5		ug/L		97	75 - 124
Dibromomethane	50.0	48.5		ug/L		97	79 - 123
Dichlorobromomethane	50.0	46.4		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	34.4		ug/L		69	32 - 152
Ethylbenzene	50.0	50.9		ug/L		102	79 - 121
Ethylene Dibromide	50.0	48.8		ug/L		98	75 - 127
Hexachlorobutadiene	50.0	46.8		ug/L		94	66 - 134

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

Lab Sample ID: LCS 680-546210/4
Matrix: Water
Analysis Batch: 546210

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	50.0	53.0		ug/L		106	72 - 131
Methyl tert-butyl ether	50.0	44.8		ug/L		90	71 - 124
Methylene Chloride	50.0	44.2		ug/L		88	74 - 124
m-Xylene & p-Xylene	50.0	50.0		ug/L		100	80 - 121
Naphthalene	50.0	44.5		ug/L		89	61 - 128
n-Butylbenzene	50.0	49.9		ug/L		100	75 - 128
N-Propylbenzene	50.0	53.2		ug/L		106	76 - 126
o-Xylene	50.0	51.4		ug/L		103	78 - 122
sec-Butylbenzene	50.0	53.1		ug/L		106	77 - 126
Styrene	50.0	51.8		ug/L		104	78 - 123
tert-Butylbenzene	50.0	52.1		ug/L		104	78 - 124
Tetrachloroethene	50.0	49.7		ug/L		99	74 - 129
Toluene	50.0	50.9		ug/L		102	80 - 121
trans-1,2-Dichloroethene	50.0	45.6		ug/L		91	75 - 124
trans-1,3-Dichloropropene	50.0	46.3		ug/L		93	73 - 127
Trichloroethene	50.0	47.4		ug/L		95	79 - 123
Trichlorofluoromethane	50.0	44.5		ug/L		89	65 - 141
Vinyl acetate	100	90.1		ug/L		90	54 - 146
Vinyl chloride	50.0	41.7		ug/L		83	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: LCSD 680-546210/5
Matrix: Water
Analysis Batch: 546210

Client Sample 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	53.0		ug/L		106	78 - 124	4	20
1,1,1-Trichloroethane	50.0	48.7		ug/L		97	74 - 131	2	20
1,1,2,2-Tetrachloroethane	50.0	51.3		ug/L		103	71 - 121	4	20
1,1,2-Trichloroethane	50.0	49.3		ug/L		99	80 - 119	1	20
1,1-Dichloroethane	50.0	47.2		ug/L		94	77 - 125	1	20
1,1-Dichloroethene	50.0	46.7		ug/L		93	71 - 131	3	20
1,1-Dichloropropene	50.0	48.0		ug/L		96	79 - 125	0	20
1,2,3-Trichlorobenzene	50.0	45.6		ug/L		91	69 - 129	1	20
1,2,3-Trichloropropane	50.0	52.9		ug/L		106	73 - 122	7	20
1,2,4-Trichlorobenzene	50.0	47.5		ug/L		95	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	53.5		ug/L		107	76 - 124	2	20
1,2-Dibromo-3-Chloropropane	50.0	45.4		ug/L		91	62 - 128	2	20
1,2-Dichlorobenzene	50.0	51.4		ug/L		103	80 - 119	2	20
1,2-Dichloroethane	50.0	50.0		ug/L		100	73 - 128	3	20
1,2-Dichloroethene, Total	100	95.1		ug/L		95	79 - 121	2	20
1,2-Dichloropropane	50.0	49.8		ug/L		100	78 - 122	3	20

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

Lab Sample ID: LCSD 680-546210/5
Matrix: Water
Analysis Batch: 546210

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trimethylbenzene	50.0	53.5		ug/L		107	75 - 124	3	20
1,3-Dichlorobenzene	50.0	50.2		ug/L		100	80 - 119	0	20
1,3-Dichloropropane	50.0	50.2		ug/L		100	80 - 119	3	20
1,4-Dichlorobenzene	50.0	49.0		ug/L		98	79 - 118	2	20
2,2-Dichloropropane	50.0	46.7		ug/L		93	60 - 139	1	20
2-Butanone (MEK)	250	231		ug/L		92	56 - 143	6	20
2-Chlorotoluene	50.0	53.0		ug/L		106	79 - 122	3	20
2-Hexanone	250	233		ug/L		93	57 - 139	4	20
4-Chlorotoluene	50.0	53.9		ug/L		108	78 - 122	2	20
4-Isopropyltoluene	50.0	49.3		ug/L		99	77 - 127	3	20
4-Methyl-2-pentanone (MIBK)	250	237		ug/L		95	67 - 130	5	20
Acetone	250	214		ug/L		86	39 - 160	1	20
Benzene	50.0	49.4		ug/L		99	79 - 120	2	20
Bromobenzene	50.0	54.9		ug/L		110	80 - 120	4	20
Bromoform	50.0	50.0		ug/L		100	66 - 130	4	20
Bromomethane	50.0	74.0	Q	ug/L		148	53 - 141	1	20
Carbon disulfide	50.0	44.1		ug/L		88	64 - 133	1	20
Carbon tetrachloride	50.0	47.8		ug/L		96	72 - 136	2	20
Chlorobenzene	50.0	53.1		ug/L		106	82 - 118	2	20
Chlorobromomethane	50.0	50.6		ug/L		101	78 - 123	7	20
Chlorodibromomethane	50.0	50.4		ug/L		101	74 - 126	3	20
Chloroethane	50.0	35.3		ug/L		71	60 - 138	7	20
Chloroform	50.0	48.6		ug/L		97	79 - 124	2	20
Chloromethane	50.0	38.2		ug/L		76	50 - 139	2	20
cis-1,2-Dichloroethene	50.0	48.7		ug/L		97	78 - 123	2	20
cis-1,3-Dichloropropene	50.0	49.9		ug/L		100	75 - 124	3	20
Dibromomethane	50.0	51.1		ug/L		102	79 - 123	5	20
Dichlorobromomethane	50.0	47.6		ug/L		95	79 - 125	3	20
Dichlorodifluoromethane	50.0	34.0		ug/L		68	32 - 152	1	20
Ethylbenzene	50.0	51.8		ug/L		104	79 - 121	2	20
Ethylene Dibromide	50.0	51.0		ug/L		102	75 - 127	4	20
Hexachlorobutadiene	50.0	47.0		ug/L		94	66 - 134	0	20
Isopropylbenzene	50.0	52.8		ug/L		106	72 - 131	0	20
Methyl tert-butyl ether	50.0	46.8		ug/L		94	71 - 124	4	20
Methylene Chloride	50.0	45.5		ug/L		91	74 - 124	3	20
m-Xylene & p-Xylene	50.0	51.5		ug/L		103	80 - 121	3	20
Naphthalene	50.0	45.2		ug/L		90	61 - 128	1	20
n-Butylbenzene	50.0	48.1		ug/L		96	75 - 128	4	20
N-Propylbenzene	50.0	53.7		ug/L		107	76 - 126	1	20
o-Xylene	50.0	52.9		ug/L		106	78 - 122	3	20
sec-Butylbenzene	50.0	53.8		ug/L		108	77 - 126	1	20
Styrene	50.0	53.7		ug/L		107	78 - 123	4	20
tert-Butylbenzene	50.0	52.5		ug/L		105	78 - 124	1	20
Tetrachloroethene	50.0	49.6		ug/L		99	74 - 129	0	20
Toluene	50.0	51.0		ug/L		102	80 - 121	0	20
trans-1,2-Dichloroethene	50.0	46.4		ug/L		93	75 - 124	2	20
trans-1,3-Dichloropropene	50.0	49.0		ug/L		98	73 - 127	6	20
Trichloroethene	50.0	47.2		ug/L		94	79 - 123	0	20

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

Lab Sample ID: LCSD 680-546210/5
Matrix: Water
Analysis Batch: 546210

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			50.0	44.3		ug/L		89	65 - 141	0	20
Vinyl acetate			100	93.7		ug/L		94	54 - 146	4	20
Vinyl chloride			50.0	40.9		ug/L		82	58 - 137	2	20
Xylenes, Total			100	104		ug/L		104	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*104*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

GC/MS VOA

Analysis Batch: 545954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159889-1	G6M-18-02-GW-84-88	Total/NA	Water	8260B	
680-159889-3	G6M-18-02-GW-104-108	Total/NA	Water	8260B	
680-159889-4	G6M-18-02-GW-114-118	Total/NA	Water	8260B	
680-159889-5	G6M-18-02-GW-FD-2	Total/NA	Water	8260B	
680-159889-6	G6M-18-02-GW-124-128	Total/NA	Water	8260B	
680-159889-8	TB-01	Total/NA	Water	8260B	
MB 680-545954/9	Method Blank	Total/NA	Water	8260B	
LCS 680-545954/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-545954/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-159889-2 MS	G6M-18-02-GW-94-98	Total/NA	Water	8260B	
680-159889-2 MSD	G6M-18-02-GW-94-98	Total/NA	Water	8260B	

Analysis Batch: 546210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159889-2	G6M-18-02-GW-94-98	Total/NA	Water	8260B	
680-159889-7	G6M-EB02	Total/NA	Water	8260B	
MB 680-546210/9	Method Blank	Total/NA	Water	8260B	
LCS 680-546210/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-546210/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Client Sample ID: G6M-18-02-GW-84-88 — **Lab Sample ID: 680-159889-1**
Date Collected: 10/22/18 15:30 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	545954	11/02/18 15:26	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-18-02-GW-94-98 — **Lab Sample ID: 680-159889-2**
Date Collected: 10/23/18 09:15 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	546210	11/05/18 14:58	Y1S	TAL SAV
	Instrument ID: CMSA2									

Client Sample ID: G6M-18-02-GW-104-108 — **Lab Sample ID: 680-159889-3**
Date Collected: 10/23/18 10:45 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	545954	11/02/18 16:15	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-18-02-GW-114-118 — **Lab Sample ID: 680-159889-4**
Date Collected: 10/23/18 12:05 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	545954	11/02/18 16:40	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-18-02-GW-FD-2 — **Lab Sample ID: 680-159889-5**
Date Collected: 10/23/18 12:05 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	545954	11/02/18 17:05	Y1S	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: G6M-18-02-GW-124-128 — **Lab Sample ID: 680-159889-6**
Date Collected: 10/23/18 12:45 — **Matrix: Water**
Date Received: 10/25/18 09:24

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	545954	11/02/18 17:30	Y1S	TAL SAV
	Instrument ID: CMSP2									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Client Sample ID: G6M-EB02

Lab Sample ID: 680-159889-7

Date Collected: 10/23/18 16:30

Matrix: Water

Date Received: 10/25/18 09:24

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	546210	11/05/18 15:20	Y1S	TAL SAV
	Instrument ID: CMSA2									

Client Sample ID: TB-01

Lab Sample ID: 680-159889-8

Date Collected: 10/22/18 00:00

Matrix: Water

Date Received: 10/25/18 09:24

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	545954	11/02/18 10:54	Y1S	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

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

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 320-133217.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jerry.lanier@testamericainc.com	State of Origin: Massachusetts	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA		Job #: 680-159889-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 11/6/2018			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens Army Installation	Project #: 68016363			
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)	8260B_DOD5/5030B Routine TAL AQ	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
G6M-18-02-GW-84-88 (680-159889-1)	10/22/18	15:30 Eastern		Water			X	2	
G6M-18-02-GW-94-98 (680-159889-2)	10/23/18	09:15 Eastern		Water			X	2	
G6M-18-02-GW-94-98 (680-159889-2MS)	10/23/18	09:15 Eastern	MS	Water			X	3	
G6M-18-02-GW-94-98 (680-159889-2MSD)	10/23/18	09:15 Eastern	MSD	Water			X	3	
G6M-18-02-GW-104-108 (680-159889-3)	10/23/18	10:45 Eastern		Water			X	2	
G6M-18-02-GW-114-118 (680-159889-4)	10/23/18	12:05 Eastern		Water			X	2	
G6M-18-02-GW-FD-2 (680-159889-5)	10/23/18	12:05 Eastern		Water			X	2	
G6M-18-02-GW-124-128 (680-159889-6)	10/23/18	12:45 Eastern		Water			X	2	
G6M-EB02 (680-159889-7)	10/23/18	16:30 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. 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 TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

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]	10/29/18 1600	[illegible]	[signature]	10-31-18 0924	TASAV
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: 3.3/3.3

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone (916) 373-5600 Fax (916) 372-1059

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Lanier, Jerry A	Carrier Tracking No(s):	COC No: 320-133217.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: jerry.lanier@testamericainc.com	State of Origin: Massachusetts	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): DoD ELAP - A2LA		Job #: 680-159889-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 11/6/2018			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: Fort Devens Army Installation	Project #: 68016363			
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)	8260B_DOD5/5030B Routine TAL AQ	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
TB-01 (680-159889-8)	10/22/18	Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

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		10/29/18 1600	TAKSA		10-31-18 0924	TASAV
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.:	Cooler Temperature(s) °C and Other Remarks: 3.3/2.3

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, lekes@komangs.com

COC #

Project: Long Term Monitoring	Laboratory: TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	Point of Contact: Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	Ship to: 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

AOC 50 Vertical Profile Sampling Event

Equipment:

Analytical Test Method: VOCs (3-40ml VOA vials, HCl)

680-159889 Chain of Custody

KOMAN, AOC 50 Drilling Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-18-02-GW-84-88	GW	10/22/18	1530	CV	G6M-18-02	GW	84	88
2	G6M-18-02-GW-94-98	GW	10/23/18	0915	CV		GW	74	98
3	G6M-18-02-GW-94-98-MS	GW	10/23/18	0915	CV		GW	94	98
4	G6M-18-02-GW-94-98-MSD	GW	10/23/18	0915	CV		GW	94	98
5	G6M-18-02-GW-104-108	GW	10/23/18	1045	CV		GW	104	108
6	G6M-18-02-GW-114-118	GW	10/23/18	1205	CV		GW	114	118
7	G6M-18-02-GW-FD-2	GW	10/23/18	1205	CV		GW	114	118
8	G6M-18-02-GW-124-128	GW	10/23/18	1445	CV		GW	124	128
9	G6M-EB02	WQ	10/23/18	1630	CV		QC	-	-
10	G6M-TB01	WQ	10/22/18	0945	CV		QC	-	-

Cooler:

Turn Around Time:

Relinquished by: (Signature)	Date	Time
Chris Vignola	10/24/18	1330
	10/24/18	
	10/24/18	
	10/29/18	1600

Received by: (Signature)	Date	Time
	10/24/18	1330
	10/25/18	0830
	10/25/18	0900
	10-31-18	0924

3.3 | 3.3 cor.

Shipping Date / Carrier / Airbill Number

Received by Laboratory: (Signature, Date, Time) & condition

Page 1 of 1

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159889-1

Login Number: 159889

List Source: TestAmerica Savannah

List Number: 1

Creator: Ragnaldsen, Amy E

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.	N/A	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159889-1

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-159877-2
Client Project/Site: Fort Devens / AOC 50 Drilling

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Jerry Lanier

Authorized for release by:
11/8/2018 9:57:09 AM

Jerry Lanier, Project Manager I
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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.

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Job ID: 680-159877-2

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Fort Devens / AOC 50 Drilling

Report Number: 680-159877-2

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 10/27/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.3º C and 4.1º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-18-01-GW-90-94 (680-159877-8), G6M-18-01-GW-100-104 (680-159877-9), G6M-18-01-GW-FD-1 (680-159877-10), G6M-18-01-GW-110-114 (680-159877-11), G6M-EB01 (680-159877-12) and G6M-TB01 (680-159877-13) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/06/2018 and 11/07/2018.

The following samples were diluted to bring the concentration of target analytes within the calibration range: (680-160032-D-7), (680-160032-D-7 MS) and (680-160032-D-7 MSD). Elevated reporting limits (RLs) are provided.

The following trip blank contains a detection for Chloroform above the reporting limit (RL). The samples associated with this trip blank were below the reporting limit for chloroform therefore; the data has been qualified and reported.

G6M-TB01 (680-159877-13)

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.

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-159877-8	G6M-18-01-GW-90-94	Water	10/24/18 14:10	10/27/18 09:55
680-159877-9	G6M-18-01-GW-100-104	Water	10/24/18 15:45	10/27/18 09:55
680-159877-10	G6M-18-01-GW-FD-1	Water	10/24/18 15:45	10/27/18 09:55
680-159877-11	G6M-18-01-GW-110-114	Water	10/25/18 08:30	10/27/18 09:55
680-159877-12	G6M-EB01	Water	10/25/18 11:30	10/27/18 09:55
680-159877-13	G6M-TB01	Water	10/25/18 00:00	10/27/18 09:55

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	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 = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.

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)
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)

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Client Sample ID: G6M-18-01-GW-90-94 — **Lab Sample ID: 680-159877-8**
Date Collected: 10/24/18 14:10 — **Matrix: Water**
Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:06	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/06/18 18:06	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:06	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 18:06	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/06/18 18:06	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 18:06	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/06/18 18:06	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 18:06	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/06/18 18:06	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:06	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/06/18 18:06	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/06/18 18:06	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/06/18 18:06	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/06/18 18:06	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 18:06	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 18:06	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/06/18 18:06	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:06	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/06/18 18:06	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 18:06	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/06/18 18:06	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:06	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:06	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/06/18 18:06	1
Acetone	10	U	10	10	7.0	ug/L		11/06/18 18:06	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/06/18 18:06	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:06	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 18:06	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/06/18 18:06	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:06	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/06/18 18:06	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:06	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/06/18 18:06	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:06	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 18:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/06/18 18:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 18:06	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 18:06	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 18:06	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/06/18 18:06	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:06	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 18:06	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
Isopropylbenzene	1.0	U M	1.0	1.0	0.35	ug/L		11/06/18 18:06	1

Client Sample ID: G6M-18-01-GW-90-94

Lab Sample ID: 680-159877-8

Date Collected: 10/24/18 14:10

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/06/18 18:06	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 18:06	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:06	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 18:06	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 18:06	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/06/18 18:06	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:06	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 18:06	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:06	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/06/18 18:06	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:06	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:06	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:06	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/06/18 18:06	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:06	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/06/18 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*11/06/18 18:06*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/06/18 18:06*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/06/18 18:06*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/06/18 18:06*	*1*

Client Sample ID: G6M-18-01-GW-100-104

Lab Sample ID: 680-159877-9

Date Collected: 10/24/18 15:45

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:24	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:24	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 08:24	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:24	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:24	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 08:24	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:24	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 08:24	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:24	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 08:24	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:24	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 08:24	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 08:24	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 08:24	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 08:24	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:24	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Client Sample ID: G6M-18-01-GW-100-104
Date Collected: 10/24/18 15:45
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-9
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:24	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 08:24	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:24	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 08:24	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:24	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 08:24	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:24	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:24	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 08:24	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 08:24	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:24	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:24	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:24	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 08:24	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:24	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 08:24	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:24	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 08:24	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:24	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 08:24	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:24	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:24	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:24	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 08:24	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:24	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:24	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:24	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 08:24	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:24	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:24	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:24	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:24	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 08:24	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:24	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:24	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:24	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 08:24	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:24	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:24	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:24	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:24	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 08:24	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:24	1

Client Sample ID: G6M-18-01-GW-100-104 — **Lab Sample ID: 680-159877-9**
Date Collected: 10/24/18 15:45 — **Matrix: Water**
Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 08:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*81 - 118*		*11/07/18 08:24*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/07/18 08:24*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*11/07/18 08:24*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/07/18 08:24*	*1*

Client Sample ID: G6M-18-01-GW-FD-1 — **Lab Sample ID: 680-159877-10**
Date Collected: 10/24/18 15:45 — **Matrix: Water**
Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:29	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/06/18 18:29	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:29	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 18:29	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/06/18 18:29	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 18:29	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/06/18 18:29	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 18:29	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/06/18 18:29	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:29	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/06/18 18:29	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/06/18 18:29	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/06/18 18:29	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/06/18 18:29	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 18:29	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 18:29	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/06/18 18:29	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:29	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/06/18 18:29	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 18:29	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/06/18 18:29	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:29	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:29	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/06/18 18:29	1
Acetone	10	U	10	10	7.0	ug/L		11/06/18 18:29	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/06/18 18:29	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:29	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 18:29	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/06/18 18:29	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:29	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/06/18 18:29	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:29	1

Client Sample ID: G6M-18-01-GW-FD-1 — **Lab Sample ID: 680-159877-10**
Date Collected: 10/24/18 15:45 — **Matrix: Water**
Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/06/18 18:29	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:29	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 18:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/06/18 18:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 18:29	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 18:29	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 18:29	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/06/18 18:29	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 18:29	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 18:29	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 18:29	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/06/18 18:29	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 18:29	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 18:29	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 18:29	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 18:29	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/06/18 18:29	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:29	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 18:29	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 18:29	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/06/18 18:29	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 18:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:29	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 18:29	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 18:29	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/06/18 18:29	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 18:29	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/06/18 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*11/06/18 18:29*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*11/06/18 18:29*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*11/06/18 18:29*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/06/18 18:29*	*1*

Client Sample ID: G6M-18-01-GW-110-114 — **Lab Sample ID: 680-159877-11**
Date Collected: 10/25/18 08:30 — **Matrix: Water**
Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:48	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 08:48	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:48	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:48	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Client Sample ID: G6M-18-01-GW-110-114
Date Collected: 10/25/18 08:30
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-11
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 08:48	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:48	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 08:48	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:48	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 08:48	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:48	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 08:48	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 08:48	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 08:48	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 08:48	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:48	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 08:48	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 08:48	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:48	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 08:48	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:48	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 08:48	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:48	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:48	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 08:48	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 08:48	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:48	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:48	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 08:48	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 08:48	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:48	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 08:48	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:48	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 08:48	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:48	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 08:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 08:48	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:48	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:48	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 08:48	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 08:48	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 08:48	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:48	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 08:48	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 08:48	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 08:48	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 08:48	1

Client Sample ID: G6M-18-01-GW-110-114

Lab Sample ID: 680-159877-11

Date Collected: 10/25/18 08:30

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 08:48	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 08:48	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:48	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 08:48	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 08:48	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 08:48	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 08:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:48	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 08:48	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 08:48	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 08:48	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 08:48	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 08:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*11/07/18 08:48*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/07/18 08:48*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*11/07/18 08:48*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/07/18 08:48*	*1*

Client Sample ID: G6M-EB01

Lab Sample ID: 680-159877-12

Date Collected: 10/25/18 11:30

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:34	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 09:34	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:34	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 09:34	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 09:34	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 09:34	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 09:34	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 09:34	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 09:34	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:34	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 09:34	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 09:34	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 09:34	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 09:34	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:34	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 09:34	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 09:34	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:34	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 09:34	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 09:34	1

Client Sample ID: G6M-EB01
Date Collected: 10/25/18 11:30
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-12
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 09:34	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:34	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:34	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 09:34	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 09:34	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:34	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 09:34	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:34	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 09:34	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:34	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 09:34	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:34	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 09:34	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 09:34	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 09:34	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 09:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 09:34	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:34	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 09:34	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 09:34	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:34	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 09:34	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:34	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 09:34	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:34	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:34	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 09:34	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 09:34	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 09:34	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:34	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 09:34	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:34	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 09:34	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:34	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:34	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:34	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 09:34	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 09:34	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 09:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/07/18 09:34*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/07/18 09:34*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*11/07/18 09:34*	*1*

Client Sample ID: G6M-EB01

Lab Sample ID: 680-159877-12

Date Collected: 10/25/18 11:30

Matrix: Water

Date Received: 10/27/18 09:55

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		89 - 112		11/07/18 09:34	1

Client Sample ID: G6M-TB01

Lab Sample ID: 680-159877-13

Date Collected: 10/25/18 00:00

Matrix: Water

Date Received: 10/27/18 09:55

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:11	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 09:11	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:11	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 09:11	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 09:11	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 09:11	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 09:11	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 09:11	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 09:11	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:11	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 09:11	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 09:11	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 09:11	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 09:11	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:11	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 09:11	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/07/18 09:11	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:11	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 09:11	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 09:11	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 09:11	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:11	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:11	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 09:11	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 09:11	1
Benzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:11	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 09:11	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 09:11	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 09:11	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:11	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 09:11	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:11	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 09:11	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
Chloroform	**3.6**		1.0	1.0	0.50	ug/L		11/07/18 09:11	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 09:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 09:11	1

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Client Sample ID: G6M-TB01
Date Collected: 10/25/18 00:00
Date Received: 10/27/18 09:55

Lab Sample ID: 680-159877-13
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 09:11	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:11	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 09:11	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 09:11	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 09:11	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 09:11	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:11	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 09:11	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 09:11	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 09:11	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 09:11	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 09:11	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 09:11	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:11	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 09:11	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 09:11	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 09:11	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 09:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:11	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 09:11	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 09:11	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 09:11	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 09:11	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 09:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*11/07/18 09:11*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 09:11*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 119*		*11/07/18 09:11*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/07/18 09:11*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-159877-8	G6M-18-01-GW-90-94	97	94	100	103
680-159877-9	G6M-18-01-GW-100-104	102	94	107	103
680-159877-10	G6M-18-01-GW-FD-1	98	94	101	102
680-159877-11	G6M-18-01-GW-110-114	105	92	110	102
680-159877-12	G6M-EB01	103	92	109	103
680-159877-13	G6M-TB01	104	93	109	102
LCS 680-546363/4	Lab Control Sample	96	95	102	103
LCS 680-546498/5	Lab Control Sample	96	95	101	104
LCSD 680-546363/5	Lab Control Sample Dup	92	95	99	103
LCSD 680-546498/6	Lab Control Sample Dup	96	96	100	105
MB 680-546363/10	Method Blank	96	92	104	103
MB 680-546498/11	Method Blank	99	93	106	104

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

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

Lab Sample ID: MB 680-546363/10
Matrix: Water
Analysis Batch: 546363

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/06/18 13:04	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 13:04	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/06/18 13:04	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 13:04	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/06/18 13:04	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 13:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/06/18 13:04	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/06/18 13:04	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/06/18 13:04	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/06/18 13:04	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/06/18 13:04	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		11/06/18 13:04	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/06/18 13:04	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 13:04	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/06/18 13:04	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/06/18 13:04	1
Acetone	10	U	10	10	7.0	ug/L		11/06/18 13:04	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/06/18 13:04	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/06/18 13:04	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/06/18 13:04	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/06/18 13:04	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 13:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/06/18 13:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/06/18 13:04	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 13:04	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/06/18 13:04	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/06/18 13:04	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/06/18 13:04	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1

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

Lab Sample ID: MB 680-546363/10
Matrix: Water
Analysis Batch: 546363

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/06/18 13:04	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/06/18 13:04	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/06/18 13:04	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/06/18 13:04	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/06/18 13:04	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/06/18 13:04	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/06/18 13:04	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/06/18 13:04	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/06/18 13:04	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/06/18 13:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/06/18 13:04	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/06/18 13:04	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/06/18 13:04	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/06/18 13:04	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/06/18 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*		*11/06/18 13:04*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*11/06/18 13:04*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*11/06/18 13:04*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*11/06/18 13:04*	*1*

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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	53.7		ug/L		107	78 - 124
1,1,1-Trichloroethane	50.0	49.7		ug/L		99	74 - 131
1,1,2,2-Tetrachloroethane	50.0	57.2		ug/L		114	71 - 121
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	80 - 119
1,1-Dichloroethane	50.0	49.8		ug/L		100	77 - 125
1,1-Dichloroethene	50.0	47.9		ug/L		96	71 - 131
1,1-Dichloropropene	50.0	52.1		ug/L		104	79 - 125
1,2,3-Trichlorobenzene	50.0	52.1		ug/L		104	69 - 129
1,2,3-Trichloropropane	50.0	57.9		ug/L		116	73 - 122
1,2,4-Trichlorobenzene	50.0	52.9		ug/L		106	69 - 130
1,2,4-Trimethylbenzene	50.0	50.3		ug/L		101	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	55.6		ug/L		111	62 - 128
1,2-Dichlorobenzene	50.0	51.7		ug/L		103	80 - 119
1,2-Dichloroethane	50.0	50.6		ug/L		101	73 - 128
1,2-Dichloroethene, Total	100	97.2		ug/L		97	79 - 121
1,2-Dichloropropane	50.0	48.7		ug/L		97	78 - 122

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

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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	50.9		ug/L		102	75 - 124
1,3-Dichlorobenzene	50.0	54.1		ug/L		108	80 - 119
1,3-Dichloropropane	50.0	51.9		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	52.2		ug/L		104	79 - 118
2,2-Dichloropropane	50.0	53.4		ug/L		107	60 - 139
2-Butanone (MEK)	250	284		ug/L		114	56 - 143
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122
2-Hexanone	250	284		ug/L		113	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	51.4		ug/L		103	77 - 127
4-Methyl-2-pentanone (MIBK)	250	281		ug/L		112	67 - 130
Acetone	250	280		ug/L		112	39 - 160
Benzene	50.0	49.2		ug/L		98	79 - 120
Bromobenzene	50.0	51.5		ug/L		103	80 - 120
Bromoform	50.0	43.7		ug/L		87	66 - 130
Bromomethane	50.0	41.1		ug/L		82	53 - 141
Carbon disulfide	50.0	47.3		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.4		ug/L		99	72 - 136
Chlorobenzene	50.0	51.4		ug/L		103	82 - 118
Chlorobromomethane	50.0	49.5		ug/L		99	78 - 123
Chlorodibromomethane	50.0	47.9		ug/L		96	74 - 126
Chloroethane	50.0	44.5		ug/L		89	60 - 138
Chloroform	50.0	49.7		ug/L		99	79 - 124
Chloromethane	50.0	50.5	M	ug/L		101	50 - 139
cis-1,2-Dichloroethene	50.0	48.5		ug/L		97	78 - 123
cis-1,3-Dichloropropene	50.0	48.9		ug/L		98	75 - 124
Dibromomethane	50.0	52.9		ug/L		106	79 - 123
Dichlorobromomethane	50.0	48.0		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	56.4		ug/L		113	32 - 152
Ethylbenzene	50.0	51.4		ug/L		103	79 - 121
Ethylene Dibromide	50.0	55.0		ug/L		110	75 - 127
Hexachlorobutadiene	50.0	49.8		ug/L		100	66 - 134
Isopropylbenzene	50.0	51.7		ug/L		103	72 - 131
Methyl tert-butyl ether	50.0	52.8		ug/L		106	71 - 124
Methylene Chloride	50.0	49.3		ug/L		99	74 - 124
m-Xylene & p-Xylene	50.0	50.6		ug/L		101	80 - 121
Naphthalene	50.0	61.0		ug/L		122	61 - 128
n-Butylbenzene	50.0	53.0		ug/L		106	75 - 128
N-Propylbenzene	50.0	51.4		ug/L		103	76 - 126
o-Xylene	50.0	50.4		ug/L		101	78 - 122
sec-Butylbenzene	50.0	50.8		ug/L		102	77 - 126
Styrene	50.0	53.2		ug/L		106	78 - 123
tert-Butylbenzene	50.0	50.7		ug/L		101	78 - 124
Tetrachloroethene	50.0	54.0		ug/L		108	74 - 129
Toluene	50.0	48.7		ug/L		97	80 - 121
trans-1,2-Dichloroethene	50.0	48.7		ug/L		97	75 - 124
trans-1,3-Dichloropropene	50.0	50.4		ug/L		101	73 - 127
Trichloroethene	50.0	52.1		ug/L		104	79 - 123

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

Lab Sample ID: LCS 680-546363/4
Matrix: Water
Analysis Batch: 546363

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	50.2		ug/L		100	65 - 141
Vinyl acetate	100	122		ug/L		122	54 - 146
Vinyl chloride	50.0	50.1		ug/L		100	58 - 137
Xylenes, Total	100	101		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*102*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Lab Sample ID: LCSD 680-546363/5
Matrix: Water
Analysis Batch: 546363

Client Sample 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	54.4		ug/L		109	78 - 124	1	20
1,1,1-Trichloroethane	50.0	48.5		ug/L		97	74 - 131	2	20
1,1,2,2-Tetrachloroethane	50.0	55.3		ug/L		111	71 - 121	3	20
1,1,2-Trichloroethane	50.0	49.0		ug/L		98	80 - 119	4	20
1,1-Dichloroethane	50.0	48.9		ug/L		98	77 - 125	2	20
1,1-Dichloroethene	50.0	46.6		ug/L		93	71 - 131	3	20
1,1-Dichloropropene	50.0	50.5		ug/L		101	79 - 125	3	20
1,2,3-Trichlorobenzene	50.0	51.9		ug/L		104	69 - 129	0	20
1,2,3-Trichloropropane	50.0	55.2		ug/L		110	73 - 122	5	20
1,2,4-Trichlorobenzene	50.0	50.7		ug/L		101	69 - 130	4	20
1,2,4-Trimethylbenzene	50.0	50.2		ug/L		100	76 - 124	0	20
1,2-Dibromo-3-Chloropropane	50.0	53.3		ug/L		107	62 - 128	4	20
1,2-Dichlorobenzene	50.0	50.9		ug/L		102	80 - 119	2	20
1,2-Dichloroethane	50.0	47.4		ug/L		95	73 - 128	6	20
1,2-Dichloroethene, Total	100	93.5		ug/L		93	79 - 121	4	20
1,2-Dichloropropane	50.0	47.1		ug/L		94	78 - 122	3	20
1,3,5-Trimethylbenzene	50.0	51.0		ug/L		102	75 - 124	0	20
1,3-Dichlorobenzene	50.0	53.1		ug/L		106	80 - 119	2	20
1,3-Dichloropropane	50.0	50.4		ug/L		101	80 - 119	3	20
1,4-Dichlorobenzene	50.0	51.7		ug/L		103	79 - 118	1	20
2,2-Dichloropropane	50.0	51.0		ug/L		102	60 - 139	5	20
2-Butanone (MEK)	250	260		ug/L		104	56 - 143	9	20
2-Chlorotoluene	50.0	51.6		ug/L		103	79 - 122	0	20
2-Hexanone	250	260		ug/L		104	57 - 139	8	20
4-Chlorotoluene	50.0	50.4		ug/L		101	78 - 122	1	20
4-Isopropyltoluene	50.0	52.2		ug/L		104	77 - 127	2	20
4-Methyl-2-pentanone (MIBK)	250	262		ug/L		105	67 - 130	7	20
Acetone	250	251		ug/L		100	39 - 160	11	20
Benzene	50.0	48.4		ug/L		97	79 - 120	2	20
Bromobenzene	50.0	51.0		ug/L		102	80 - 120	1	20
Bromoform	50.0	42.4		ug/L		85	66 - 130	3	20
Bromomethane	50.0	42.1		ug/L		84	53 - 141	2	20

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

Lab Sample ID: LCSD 680-546363/5
Matrix: Water
Analysis Batch: 546363

Client Sample 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 disulfide			50.0	46.8		ug/L		94	64 - 133	1	20
Carbon tetrachloride			50.0	47.8		ug/L		96	72 - 136	3	20
Chlorobenzene			50.0	51.3		ug/L		103	82 - 118	0	20
Chlorobromomethane			50.0	47.2		ug/L		94	78 - 123	5	20
Chlorodibromomethane			50.0	46.6		ug/L		93	74 - 126	3	20
Chloroethane			50.0	41.3		ug/L		83	60 - 138	7	20
Chloroform			50.0	48.0		ug/L		96	79 - 124	3	20
Chloromethane			50.0	49.9	M	ug/L		100	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	46.5		ug/L		93	78 - 123	4	20
cis-1,3-Dichloropropene			50.0	47.2		ug/L		94	75 - 124	4	20
Dibromomethane			50.0	50.9		ug/L		102	79 - 123	4	20
Dichlorobromomethane			50.0	46.4		ug/L		93	79 - 125	3	20
Dichlorodifluoromethane			50.0	55.9		ug/L		112	32 - 152	1	20
Ethylbenzene			50.0	51.9		ug/L		104	79 - 121	1	20
Ethylene Dibromide			50.0	52.8		ug/L		106	75 - 127	4	20
Hexachlorobutadiene			50.0	49.7		ug/L		99	66 - 134	0	20
Isopropylbenzene			50.0	52.2		ug/L		104	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.9		ug/L		100	71 - 124	6	20
Methylene Chloride			50.0	46.5		ug/L		93	74 - 124	6	20
m-Xylene & p-Xylene			50.0	51.0		ug/L		102	80 - 121	1	20
Naphthalene			50.0	58.5		ug/L		117	61 - 128	4	20
n-Butylbenzene			50.0	52.5		ug/L		105	75 - 128	1	20
N-Propylbenzene			50.0	51.2		ug/L		102	76 - 126	0	20
o-Xylene			50.0	50.2		ug/L		100	78 - 122	0	20
sec-Butylbenzene			50.0	51.1		ug/L		102	77 - 126	1	20
Styrene			50.0	52.6		ug/L		105	78 - 123	1	20
tert-Butylbenzene			50.0	50.7		ug/L		101	78 - 124	0	20
Tetrachloroethene			50.0	52.9		ug/L		106	74 - 129	2	20
Toluene			50.0	48.5		ug/L		97	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	47.0		ug/L		94	75 - 124	4	20
trans-1,3-Dichloropropene			50.0	49.3		ug/L		99	73 - 127	2	20
Trichloroethene			50.0	51.1		ug/L		102	79 - 123	2	20
Trichlorofluoromethane			50.0	52.8		ug/L		106	65 - 141	5	20
Vinyl acetate			100	116		ug/L		116	54 - 146	5	20
Vinyl chloride			50.0	48.8		ug/L		98	58 - 137	3	20
Xylenes, Total			100	101		ug/L		101	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*103*		*89 - 112*

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

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

Lab Sample ID: MB 680-546498/11
Matrix: Water
Analysis Batch: 546498

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		11/07/18 01:50	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 01:50	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		11/07/18 01:50	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 01:50	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		11/07/18 01:50	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 01:50	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		11/07/18 01:50	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		11/07/18 01:50	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		11/07/18 01:50	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		11/07/18 01:50	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		11/07/18 01:50	1
1,4-Dichlorobenzene	1.0	U M	1.0	1.0	0.46	ug/L		11/07/18 01:50	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		11/07/18 01:50	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 01:50	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		11/07/18 01:50	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		11/07/18 01:50	1
Acetone	10	U	10	10	7.0	ug/L		11/07/18 01:50	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		11/07/18 01:50	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		11/07/18 01:50	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		11/07/18 01:50	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		11/07/18 01:50	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 01:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		11/07/18 01:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		11/07/18 01:50	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 01:50	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		11/07/18 01:50	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		11/07/18 01:50	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		11/07/18 01:50	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1

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

Lab Sample ID: MB 680-546498/11
Matrix: Water
Analysis Batch: 546498

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		11/07/18 01:50	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		11/07/18 01:50	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		11/07/18 01:50	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		11/07/18 01:50	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		11/07/18 01:50	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		11/07/18 01:50	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		11/07/18 01:50	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		11/07/18 01:50	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		11/07/18 01:50	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		11/07/18 01:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		11/07/18 01:50	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		11/07/18 01:50	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		11/07/18 01:50	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		11/07/18 01:50	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		11/07/18 01:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*11/07/18 01:50*	*1*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*		*11/07/18 01:50*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*11/07/18 01:50*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*11/07/18 01:50*	*1*

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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	55.2		ug/L		110	78 - 124
1,1,1-Trichloroethane	50.0	49.0		ug/L		98	74 - 131
1,1,2,2-Tetrachloroethane	50.0	56.7		ug/L		113	71 - 121
1,1,2-Trichloroethane	50.0	50.3		ug/L		101	80 - 119
1,1-Dichloroethane	50.0	47.1		ug/L		94	77 - 125
1,1-Dichloroethene	50.0	47.3		ug/L		95	71 - 131
1,1-Dichloropropene	50.0	51.5		ug/L		103	79 - 125
1,2,3-Trichlorobenzene	50.0	52.4		ug/L		105	69 - 129
1,2,3-Trichloropropane	50.0	55.0		ug/L		110	73 - 122
1,2,4-Trichlorobenzene	50.0	51.6		ug/L		103	69 - 130
1,2,4-Trimethylbenzene	50.0	51.3		ug/L		103	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	56.4		ug/L		113	62 - 128
1,2-Dichlorobenzene	50.0	52.3		ug/L		105	80 - 119
1,2-Dichloroethane	50.0	49.5		ug/L		99	73 - 128
1,2-Dichloroethene, Total	100	93.9		ug/L		94	79 - 121
1,2-Dichloropropane	50.0	48.1		ug/L		96	78 - 122

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

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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	51.5		ug/L		103	75 - 124
1,3-Dichlorobenzene	50.0	53.9		ug/L		108	80 - 119
1,3-Dichloropropane	50.0	52.1		ug/L		104	80 - 119
1,4-Dichlorobenzene	50.0	51.9		ug/L		104	79 - 118
2,2-Dichloropropane	50.0	43.7		ug/L		87	60 - 139
2-Butanone (MEK)	250	264		ug/L		106	56 - 143
2-Chlorotoluene	50.0	51.5		ug/L		103	79 - 122
2-Hexanone	250	269		ug/L		108	57 - 139
4-Chlorotoluene	50.0	51.1		ug/L		102	78 - 122
4-Isopropyltoluene	50.0	52.4		ug/L		105	77 - 127
4-Methyl-2-pentanone (MIBK)	250	272		ug/L		109	67 - 130
Acetone	250	270		ug/L		108	39 - 160
Benzene	50.0	49.1		ug/L		98	79 - 120
Bromobenzene	50.0	51.8		ug/L		104	80 - 120
Bromoform	50.0	45.8		ug/L		92	66 - 130
Bromomethane	50.0	49.5		ug/L		99	53 - 141
Carbon disulfide	50.0	47.5		ug/L		95	64 - 133
Carbon tetrachloride	50.0	49.8		ug/L		100	72 - 136
Chlorobenzene	50.0	52.3		ug/L		105	82 - 118
Chlorobromomethane	50.0	48.8		ug/L		98	78 - 123
Chlorodibromomethane	50.0	49.3		ug/L		99	74 - 126
Chloroethane	50.0	45.2		ug/L		90	60 - 138
Chloroform	50.0	49.0		ug/L		98	79 - 124
Chloromethane	50.0	49.7	M	ug/L		99	50 - 139
cis-1,2-Dichloroethene	50.0	46.4		ug/L		93	78 - 123
cis-1,3-Dichloropropene	50.0	46.4		ug/L		93	75 - 124
Dibromomethane	50.0	52.9		ug/L		106	79 - 123
Dichlorobromomethane	50.0	48.2		ug/L		96	79 - 125
Dichlorodifluoromethane	50.0	57.6		ug/L		115	32 - 152
Ethylbenzene	50.0	52.6		ug/L		105	79 - 121
Ethylene Dibromide	50.0	54.3		ug/L		109	75 - 127
Hexachlorobutadiene	50.0	49.3		ug/L		99	66 - 134
Isopropylbenzene	50.0	52.4		ug/L		105	72 - 131
Methyl tert-butyl ether	50.0	48.4		ug/L		97	71 - 124
Methylene Chloride	50.0	48.3		ug/L		97	74 - 124
m-Xylene & p-Xylene	50.0	51.1		ug/L		102	80 - 121
Naphthalene	50.0	60.3		ug/L		121	61 - 128
n-Butylbenzene	50.0	52.6		ug/L		105	75 - 128
N-Propylbenzene	50.0	51.7		ug/L		103	76 - 126
o-Xylene	50.0	51.0		ug/L		102	78 - 122
sec-Butylbenzene	50.0	51.2		ug/L		102	77 - 126
Styrene	50.0	53.3		ug/L		107	78 - 123
tert-Butylbenzene	50.0	50.8		ug/L		102	78 - 124
Tetrachloroethene	50.0	53.1		ug/L		106	74 - 129
Toluene	50.0	48.6		ug/L		97	80 - 121
trans-1,2-Dichloroethene	50.0	47.5		ug/L		95	75 - 124
trans-1,3-Dichloropropene	50.0	49.5		ug/L		99	73 - 127
Trichloroethene	50.0	52.3		ug/L		105	79 - 123

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

Lab Sample ID: LCS 680-546498/5
Matrix: Water
Analysis Batch: 546498

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	51.2		ug/L		102	65 - 141
Vinyl acetate	100	101		ug/L		101	54 - 146
Vinyl chloride	50.0	50.0		ug/L		100	58 - 137
Xylenes, Total	100	102		ug/L		102	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*101*		*80 - 119*
Toluene-d8 (Surr)	*104*		*89 - 112*

Lab Sample ID: LCSD 680-546498/6
Matrix: Water
Analysis Batch: 546498

Client Sample 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	55.1		ug/L		110	78 - 124	0	20
1,1,1-Trichloroethane	50.0	50.0		ug/L		100	74 - 131	2	20
1,1,2,2-Tetrachloroethane	50.0	54.7		ug/L		109	71 - 121	4	20
1,1,2-Trichloroethane	50.0	48.0		ug/L		96	80 - 119	5	20
1,1-Dichloroethane	50.0	48.6		ug/L		97	77 - 125	3	20
1,1-Dichloroethene	50.0	48.1		ug/L		96	71 - 131	2	20
1,1-Dichloropropene	50.0	51.2		ug/L		102	79 - 125	1	20
1,2,3-Trichlorobenzene	50.0	51.8		ug/L		104	69 - 129	1	20
1,2,3-Trichloropropane	50.0	56.8		ug/L		114	73 - 122	3	20
1,2,4-Trichlorobenzene	50.0	51.9		ug/L		104	69 - 130	1	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124	1	20
1,2-Dibromo-3-Chloropropane	50.0	54.1		ug/L		108	62 - 128	4	20
1,2-Dichlorobenzene	50.0	52.0		ug/L		104	80 - 119	1	20
1,2-Dichloroethane	50.0	48.8		ug/L		98	73 - 128	1	20
1,2-Dichloroethene, Total	100	92.8		ug/L		93	79 - 121	1	20
1,2-Dichloropropane	50.0	47.3		ug/L		95	78 - 122	2	20
1,3,5-Trimethylbenzene	50.0	52.2		ug/L		104	75 - 124	1	20
1,3-Dichlorobenzene	50.0	54.3		ug/L		109	80 - 119	1	20
1,3-Dichloropropane	50.0	50.3		ug/L		101	80 - 119	4	20
1,4-Dichlorobenzene	50.0	52.7		ug/L		105	79 - 118	2	20
2,2-Dichloropropane	50.0	43.4		ug/L		87	60 - 139	1	20
2-Butanone (MEK)	250	243		ug/L		97	56 - 143	8	20
2-Chlorotoluene	50.0	52.7		ug/L		105	79 - 122	2	20
2-Hexanone	250	251		ug/L		100	57 - 139	7	20
4-Chlorotoluene	50.0	51.9		ug/L		104	78 - 122	2	20
4-Isopropyltoluene	50.0	52.3		ug/L		105	77 - 127	0	20
4-Methyl-2-pentanone (MIBK)	250	254		ug/L		102	67 - 130	7	20
Acetone	250	230		ug/L		92	39 - 160	16	20
Benzene	50.0	48.6		ug/L		97	79 - 120	1	20
Bromobenzene	50.0	51.6		ug/L		103	80 - 120	0	20
Bromoform	50.0	44.4		ug/L		89	66 - 130	3	20
Bromomethane	50.0	50.1		ug/L		100	53 - 141	1	20

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

Lab Sample ID: LCSD 680-546498/6
Matrix: Water
Analysis Batch: 546498

Client Sample 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 disulfide			50.0	46.9		ug/L		94	64 - 133	1	20
Carbon tetrachloride			50.0	49.7		ug/L		99	72 - 136	0	20
Chlorobenzene			50.0	52.6		ug/L		105	82 - 118	1	20
Chlorobromomethane			50.0	47.7		ug/L		95	78 - 123	2	20
Chlorodibromomethane			50.0	47.4		ug/L		95	74 - 126	4	20
Chloroethane			50.0	43.8		ug/L		88	60 - 138	3	20
Chloroform			50.0	49.4		ug/L		99	79 - 124	1	20
Chloromethane			50.0	50.3	M	ug/L		101	50 - 139	1	20
cis-1,2-Dichloroethene			50.0	45.9		ug/L		92	78 - 123	1	20
cis-1,3-Dichloropropene			50.0	45.8		ug/L		92	75 - 124	1	20
Dibromomethane			50.0	51.1		ug/L		102	79 - 123	3	20
Dichlorobromomethane			50.0	47.4		ug/L		95	79 - 125	2	20
Dichlorodifluoromethane			50.0	57.8		ug/L		116	32 - 152	0	20
Ethylbenzene			50.0	53.1		ug/L		106	79 - 121	1	20
Ethylene Dibromide			50.0	52.2		ug/L		104	75 - 127	4	20
Hexachlorobutadiene			50.0	48.8		ug/L		98	66 - 134	1	20
Isopropylbenzene			50.0	53.2		ug/L		106	72 - 131	1	20
Methyl tert-butyl ether			50.0	49.9		ug/L		100	71 - 124	3	20
Methylene Chloride			50.0	47.9		ug/L		96	74 - 124	1	20
m-Xylene & p-Xylene			50.0	52.2		ug/L		104	80 - 121	2	20
Naphthalene			50.0	59.4		ug/L		119	61 - 128	1	20
n-Butylbenzene			50.0	52.2		ug/L		104	75 - 128	1	20
N-Propylbenzene			50.0	52.3		ug/L		105	76 - 126	1	20
o-Xylene			50.0	51.6		ug/L		103	78 - 122	1	20
sec-Butylbenzene			50.0	52.1		ug/L		104	77 - 126	2	20
Styrene			50.0	53.7		ug/L		107	78 - 123	1	20
tert-Butylbenzene			50.0	51.7		ug/L		103	78 - 124	2	20
Tetrachloroethene			50.0	53.4		ug/L		107	74 - 129	0	20
Toluene			50.0	48.4		ug/L		97	80 - 121	0	20
trans-1,2-Dichloroethene			50.0	46.8		ug/L		94	75 - 124	1	20
trans-1,3-Dichloropropene			50.0	48.1		ug/L		96	73 - 127	3	20
Trichloroethene			50.0	52.0		ug/L		104	79 - 123	1	20
Trichlorofluoromethane			50.0	52.6		ug/L		105	65 - 141	3	20
Vinyl acetate			100	97.7		ug/L		98	54 - 146	4	20
Vinyl chloride			50.0	49.4		ug/L		99	58 - 137	1	20
Xylenes, Total			100	104		ug/L		104	79 - 121	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*105*		*89 - 112*

GC/MS VOA

Analysis Batch: 546363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-8	G6M-18-01-GW-90-94	Total/NA	Water	8260B	
680-159877-10	G6M-18-01-GW-FD-1	Total/NA	Water	8260B	
MB 680-546363/10	Method Blank	Total/NA	Water	8260B	
LCS 680-546363/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-546363/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 546498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-159877-9	G6M-18-01-GW-100-104	Total/NA	Water	8260B	
680-159877-11	G6M-18-01-GW-110-114	Total/NA	Water	8260B	
680-159877-12	G6M-EB01	Total/NA	Water	8260B	
680-159877-13	G6M-TB01	Total/NA	Water	8260B	
MB 680-546498/11	Method Blank	Total/NA	Water	8260B	
LCS 680-546498/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-546498/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Client Sample ID: G6M-18-01-GW-90-94

Lab Sample ID: 680-159877-8

Date Collected: 10/24/18 14:10

Matrix: Water

Date Received: 10/27/18 09:55

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	546363	11/06/18 18:06	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-18-01-GW-100-104

Lab Sample ID: 680-159877-9

Date Collected: 10/24/18 15:45

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 08:24	JLK	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-18-01-GW-FD-1

Lab Sample ID: 680-159877-10

Date Collected: 10/24/18 15:45

Matrix: Water

Date Received: 10/27/18 09:55

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	546363	11/06/18 18:29	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-18-01-GW-110-114

Lab Sample ID: 680-159877-11

Date Collected: 10/25/18 08:30

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 08:48	JLK	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-EB01

Lab Sample ID: 680-159877-12

Date Collected: 10/25/18 11:30

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 09:34	JLK	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-TB01

Lab Sample ID: 680-159877-13

Date Collected: 10/25/18 00:00

Matrix: Water

Date Received: 10/27/18 09:55

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	546498	11/07/18 09:11	JLK	TAL SAV
	Instrument ID: CMSB									

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments:
AOC 50 Vertical Profile Sampling

Equipment:

KOMAN, AOC 50 Drilling Fall 2018

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: VOCS (3-40ml VOA vials, HCl)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-18-01-GW-90-94	GW	10/24/18	1410	CV	✓	G6M-18-01	GW	90	94
2	G6M-18-01-									
3	G6M-18-01									
4	G6M-18-01									
5	G6M-18-01									
6	G6M-18-01									
7	G6M-18-01									
8										
9	G6M-EB01									
10	G6M-TB01	WQ								
Cooler:		**Turn Around Time:**								

Relinquished by: *(Signature)*	Date	Time
Chris Vignola	10/24/18	1720
[signature]	10/26/18	1330
[signature]	10-26-18	1800

Received by: *(Signature)*	Date	Time
[signature]	10/24/18	1720
[signature]	10/26/18	1330

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**
[signature] 10/27/18 955 4.1/4.1

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

COC #

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

AOC 50 Vertical Profile Sampling

Equipment:

3/8"x1/2" HDPE Tubing
Bailer

KOMAN, AOC 50 Drilling Fall 2018

Analytical Test Method

	Sample ID	Matrix	Date	Time	Samp Init.	VOCs (3-40ml VOA vials, HCl)										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	G6M-18-01-GW-110-114	WG	10/25/18	0830	BrA	X										G6M-18-01	N		
2	~~G6M-18-01-~~																		
3	~~G6M-18-01~~																		
4	~~G6M-18-01~~																		
5	~~G6M-18-01.~~																		
6	~~G6M-18-01~~																		
7	~~G6M-18-01.~~																		
8																			
9	G6M-EB01	WQ	10/25/18	1130	BrA	X											WQ		
10	G6M-TB01	WQ	10/25/18			X											WQ		
Cooler:		**Turn Around Time:**																	

Relinquished by: *(Signature)*	**Date**	**Time**
	10/26/18	1330
	10.26.18	1707

Received by: *(Signature)*	**Date**	**Time**
	10-26-18	1330

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

10/27/18 955 4.1/4.1

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-159877-2

Login Number: 159877

List Source: TestAmerica Savannah

List Number: 1

Creator: Elwell, Devin M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Fort Devens / AOC 50 Drilling

TestAmerica Job ID: 680-159877-2

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-18
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-18
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-18
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-18
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-18
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-18
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	12-31-18
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-18
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

B.4

Winter 2019 New Monitoring Well Baseline Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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

TestAmerica Job ID: 680-163405-1

Client Project/Site: Devins LTM AOC 50 VOC Plume Delineation

For:
KOMAN Government Solutions, LLC
293 Boston Post Road
Suite 100
Marlborough, Massachusetts 01752

Attn: Laurie Ekes

Authorized for release by:
1/25/2019 4:24:30 PM

Jerry Lanier, Project Manager I
(912)250-0281
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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.

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Job ID: 680-163405-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: KOMAN Government Solutions, LLC

Project: Devins LTM AOC 50 VOC Plume Delineation

Report Number: 680-163405-1

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 01/18/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.6 C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)

Samples G6M-18-01-JAN19 (680-163405-1), G6M-18-02-JAN19 (680-163405-2) and AOC50-TB-011419 (680-163405-3) were analyzed for Volatile Organic Compounds (GC/MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/23/2019.

The continuing calibration verification (CCV) associated with batch 680-555967 recovered above the upper control limit for Styrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-555967.

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

Sample Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-163405-1	G6M-18-01-JAN19	Water	01/14/19 12:05	01/18/19 09:40
680-163405-2	G6M-18-02-JAN19	Water	01/14/19 09:30	01/18/19 09:40
680-163405-3	AOC50-TB-011419	Water	01/14/19 00:00	01/18/19 09:40

Method Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	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 = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
Q	One or more quality control criteria failed.

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)
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)

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

Client Sample ID: G6M-18-01-JAN19
Date Collected: 01/14/19 12:05
Date Received: 01/18/19 09:40

Lab Sample ID: 680-163405-1
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 14:37	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 14:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		01/23/19 14:37	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 14:37	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 14:37	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		01/23/19 14:37	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 14:37	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		01/23/19 14:37	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 14:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		01/23/19 14:37	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 14:37	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		01/23/19 14:37	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		01/23/19 14:37	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		01/23/19 14:37	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		01/23/19 14:37	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 14:37	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 14:37	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		01/23/19 14:37	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 14:37	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		01/23/19 14:37	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		01/23/19 14:37	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		01/23/19 14:37	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 14:37	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 14:37	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		01/23/19 14:37	1
Acetone	10	U	10	10	7.0	ug/L		01/23/19 14:37	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		01/23/19 14:37	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 14:37	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 14:37	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		01/23/19 14:37	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 14:37	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		01/23/19 14:37	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 14:37	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		01/23/19 14:37	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 14:37	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 14:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		01/23/19 14:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 14:37	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 14:37	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 14:37	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		01/23/19 14:37	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 14:37	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 14:37	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 14:37	1

Client Sample ID: G6M-18-01-JAN19

Date Collected: 01/14/19 12:05
Date Received: 01/18/19 09:40

Lab Sample ID: 680-163405-1

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		01/23/19 14:37	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 14:37	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 14:37	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 14:37	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 14:37	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		01/23/19 14:37	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 14:37	1
Styrene	0.50	U Q	1.0	0.50	0.27	ug/L		01/23/19 14:37	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 14:37	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		01/23/19 14:37	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 14:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 14:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 14:37	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 14:37	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 14:37	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		01/23/19 14:37	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 14:37	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		01/23/19 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*		*01/23/19 14:37*	*1*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*01/23/19 14:37*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 119*		*01/23/19 14:37*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*01/23/19 14:37*	*1*

Client Sample ID: G6M-18-02-JAN19

Date Collected: 01/14/19 09:30
Date Received: 01/18/19 09:40

Lab Sample ID: 680-163405-2

Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 15:00	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 15:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		01/23/19 15:00	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 15:00	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 15:00	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		01/23/19 15:00	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 15:00	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		01/23/19 15:00	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 15:00	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		01/23/19 15:00	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 15:00	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		01/23/19 15:00	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		01/23/19 15:00	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		01/23/19 15:00	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		01/23/19 15:00	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 15:00	1

Client Sample ID: G6M-18-02-JAN19
Date Collected: 01/14/19 09:30
Date Received: 01/18/19 09:40

Lab Sample ID: 680-163405-2
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 15:00	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		01/23/19 15:00	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 15:00	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		01/23/19 15:00	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		01/23/19 15:00	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		01/23/19 15:00	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 15:00	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 15:00	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		01/23/19 15:00	1
Acetone	10	U	10	10	7.0	ug/L		01/23/19 15:00	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		01/23/19 15:00	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 15:00	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 15:00	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		01/23/19 15:00	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 15:00	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		01/23/19 15:00	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 15:00	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		01/23/19 15:00	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 15:00	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 15:00	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		01/23/19 15:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 15:00	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 15:00	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 15:00	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		01/23/19 15:00	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 15:00	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 15:00	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 15:00	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		01/23/19 15:00	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 15:00	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 15:00	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 15:00	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 15:00	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		01/23/19 15:00	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 15:00	1
Styrene	0.50	U Q	1.0	0.50	0.27	ug/L		01/23/19 15:00	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 15:00	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		01/23/19 15:00	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 15:00	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 15:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 15:00	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 15:00	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 15:00	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		01/23/19 15:00	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 15:00	1

Client Sample ID: G6M-18-02-JAN19 — **Lab Sample ID: 680-163405-2**
Date Collected: 01/14/19 09:30 — **Matrix: Water**
Date Received: 01/18/19 09:40

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		01/23/19 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*81 - 118*		*01/23/19 15:00*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*01/23/19 15:00*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*01/23/19 15:00*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*01/23/19 15:00*	*1*

Client Sample ID: AOC50-TB-011419 — **Lab Sample ID: 680-163405-3**
Date Collected: 01/14/19 00:00 — **Matrix: Water**
Date Received: 01/18/19 09:40

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:55	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		01/23/19 11:55	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 11:55	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 11:55	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		01/23/19 11:55	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 11:55	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		01/23/19 11:55	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 11:55	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		01/23/19 11:55	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:55	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		01/23/19 11:55	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		01/23/19 11:55	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		01/23/19 11:55	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		01/23/19 11:55	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 11:55	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 11:55	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		01/23/19 11:55	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:55	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		01/23/19 11:55	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		01/23/19 11:55	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		01/23/19 11:55	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:55	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:55	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		01/23/19 11:55	1
Acetone	10	U	10	10	7.0	ug/L		01/23/19 11:55	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		01/23/19 11:55	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:55	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 11:55	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		01/23/19 11:55	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 11:55	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		01/23/19 11:55	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:55	1

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

Client Sample ID: AOC50-TB-011419
Date Collected: 01/14/19 00:00
Date Received: 01/18/19 09:40

Lab Sample ID: 680-163405-3
Matrix: Water

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		01/23/19 11:55	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:55	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 11:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		01/23/19 11:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 11:55	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:55	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 11:55	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		01/23/19 11:55	1
Ethylbenzene	0.50	U M	1.0	0.50	0.33	ug/L		01/23/19 11:55	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 11:55	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:55	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		01/23/19 11:55	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:55	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:55	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 11:55	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 11:55	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		01/23/19 11:55	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:55	1
Styrene	0.50	U Q	1.0	0.50	0.27	ug/L		01/23/19 11:55	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:55	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		01/23/19 11:55	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:55	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:55	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:55	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		01/23/19 11:55	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:55	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		01/23/19 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*01/23/19 11:55*	*1*
4-Bromofluorobenzene (Surr)	*105*		*85 - 114*		*01/23/19 11:55*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*01/23/19 11:55*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*01/23/19 11:55*	*1*

Surrogate Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
680-163405-1	G6M-18-01-JAN19	98	103	101	99
680-163405-2	G6M-18-02-JAN19	97	102	95	101
680-163405-3	AOC50-TB-011419	93	105	98	100
LCS 680-555967/4	Lab Control Sample	92	95	96	94
LCSD 680-555967/5	Lab Control Sample Dup	93	99	100	97
MB 680-555967/8	Method Blank	93	101	98	99

Surrogate Legend

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

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

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

Lab Sample ID: MB 680-555967/8
Matrix: Water
Analysis Batch: 555967

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:08	1
1,1,1-Trichloroethane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1.0	0.62	ug/L		01/23/19 11:08	1
1,1,2-Trichloroethane	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 11:08	1
1,1-Dichloroethane	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 11:08	1
1,1-Dichloroethene	1.0	U	1.0	1.0	0.36	ug/L		01/23/19 11:08	1
1,1-Dichloropropene	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 11:08	1
1,2,3-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
1,2,3-Trichloropropane	1.0	U	1.0	1.0	0.39	ug/L		01/23/19 11:08	1
1,2,4-Trichlorobenzene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
1,2,4-Trimethylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 11:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	5.0	2.0	1.1	ug/L		01/23/19 11:08	1
1,2-Dichlorobenzene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:08	1
1,2-Dichloroethane	1.0	U M	1.0	1.0	0.50	ug/L		01/23/19 11:08	1
1,2-Dichloroethene, Total	1.0	U	2.0	1.0	0.74	ug/L		01/23/19 11:08	1
1,2-Dichloropropane	1.0	U	1.0	1.0	0.67	ug/L		01/23/19 11:08	1
1,3,5-Trimethylbenzene	0.50	U	1.0	0.50	0.31	ug/L		01/23/19 11:08	1
1,3-Dichlorobenzene	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 11:08	1
1,3-Dichloropropane	1.0	U	1.0	1.0	0.34	ug/L		01/23/19 11:08	1
1,4-Dichlorobenzene	1.0	U	1.0	1.0	0.46	ug/L		01/23/19 11:08	1
2,2-Dichloropropane	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:08	1
2-Butanone (MEK)	10	U	10	10	3.4	ug/L		01/23/19 11:08	1
2-Chlorotoluene	0.50	U	1.0	0.50	0.27	ug/L		01/23/19 11:08	1
2-Hexanone	5.0	U	10	5.0	2.0	ug/L		01/23/19 11:08	1
4-Chlorotoluene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:08	1
4-Isopropyltoluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	10	5.0	2.1	ug/L		01/23/19 11:08	1
Acetone	10	U	10	10	7.0	ug/L		01/23/19 11:08	1
Benzene	1.0	U M	1.0	1.0	0.43	ug/L		01/23/19 11:08	1
Bromobenzene	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:08	1
Bromoform	1.0	U	1.0	1.0	0.43	ug/L		01/23/19 11:08	1
Bromomethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
Carbon disulfide	2.0	U	2.0	2.0	0.43	ug/L		01/23/19 11:08	1
Carbon tetrachloride	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 11:08	1
Chlorobenzene	0.50	U	1.0	0.50	0.26	ug/L		01/23/19 11:08	1
Chlorobromomethane	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:08	1
Chlorodibromomethane	0.50	U	1.0	0.50	0.32	ug/L		01/23/19 11:08	1
Chloroethane	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
Chloroform	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:08	1
Chloromethane	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 11:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	1.0	0.41	ug/L		01/23/19 11:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	1.0	0.40	ug/L		01/23/19 11:08	1
Dibromomethane	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:08	1
Dichlorobromomethane	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 11:08	1
Dichlorodifluoromethane	1.0	U	1.0	1.0	0.60	ug/L		01/23/19 11:08	1
Ethylbenzene	0.50	U	1.0	0.50	0.33	ug/L		01/23/19 11:08	1
Ethylene Dibromide	1.0	U	1.0	1.0	0.44	ug/L		01/23/19 11:08	1
Hexachlorobutadiene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1

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

Lab Sample ID: MB 680-555967/8
Matrix: Water
Analysis Batch: 555967

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Isopropylbenzene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:08	1
Methyl tert-butyl ether	0.50	U	10	0.50	0.30	ug/L		01/23/19 11:08	1
Methylene Chloride	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
m-Xylene & p-Xylene	1.0	U	1.0	1.0	0.35	ug/L		01/23/19 11:08	1
Naphthalene	5.0	U	5.0	5.0	2.5	ug/L		01/23/19 11:08	1
n-Butylbenzene	1.0	U	1.0	1.0	0.47	ug/L		01/23/19 11:08	1
N-Propylbenzene	1.0	U	1.0	1.0	0.38	ug/L		01/23/19 11:08	1
o-Xylene	0.50	U	1.0	0.50	0.23	ug/L		01/23/19 11:08	1
sec-Butylbenzene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:08	1
Styrene	0.50	U	1.0	0.50	0.27	ug/L		01/23/19 11:08	1
tert-Butylbenzene	1.0	U	1.0	1.0	0.45	ug/L		01/23/19 11:08	1
Tetrachloroethene	1.0	U	1.0	1.0	0.74	ug/L		01/23/19 11:08	1
Toluene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	1.0	0.37	ug/L		01/23/19 11:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:08	1
Trichloroethene	1.0	U	1.0	1.0	0.48	ug/L		01/23/19 11:08	1
Trichlorofluoromethane	1.0	U	1.0	1.0	0.42	ug/L		01/23/19 11:08	1
Vinyl acetate	2.0	U	2.0	2.0	0.81	ug/L		01/23/19 11:08	1
Vinyl chloride	1.0	U	1.0	1.0	0.50	ug/L		01/23/19 11:08	1
Xylenes, Total	0.50	U	2.0	0.50	0.23	ug/L		01/23/19 11:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*		*01/23/19 11:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*01/23/19 11:08*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*01/23/19 11:08*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*01/23/19 11:08*	*1*

Lab Sample ID: LCS 680-555967/4
Matrix: Water
Analysis Batch: 555967

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	47.8		ug/L		96	78 - 124
1,1,1-Trichloroethane	50.0	47.3		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	50.0	44.7		ug/L		89	71 - 121
1,1,2-Trichloroethane	50.0	43.1		ug/L		86	80 - 119
1,1-Dichloroethane	50.0	45.3		ug/L		91	77 - 125
1,1-Dichloroethene	50.0	47.0		ug/L		94	71 - 131
1,1-Dichloropropene	50.0	48.7		ug/L		97	79 - 125
1,2,3-Trichlorobenzene	50.0	48.2		ug/L		96	69 - 129
1,2,3-Trichloropropane	50.0	43.8		ug/L		88	73 - 122
1,2,4-Trichlorobenzene	50.0	50.7		ug/L		101	69 - 130
1,2,4-Trimethylbenzene	50.0	49.8		ug/L		100	76 - 124
1,2-Dibromo-3-Chloropropane	50.0	40.4		ug/L		81	62 - 128
1,2-Dichlorobenzene	50.0	45.9		ug/L		92	80 - 119
1,2-Dichloroethane	50.0	46.6		ug/L		93	73 - 128
1,2-Dichloroethene, Total	100	92.7		ug/L		93	79 - 121
1,2-Dichloropropane	50.0	46.7		ug/L		93	78 - 122

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

Lab Sample ID: LCS 680-555967/4
Matrix: Water
Analysis Batch: 555967

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	49.3		ug/L		99	75 - 124
1,3-Dichlorobenzene	50.0	47.6		ug/L		95	80 - 119
1,3-Dichloropropane	50.0	46.9		ug/L		94	80 - 119
1,4-Dichlorobenzene	50.0	46.1		ug/L		92	79 - 118
2,2-Dichloropropane	50.0	50.0		ug/L		100	60 - 139
2-Butanone (MEK)	250	202		ug/L		81	56 - 143
2-Chlorotoluene	50.0	46.4		ug/L		93	79 - 122
2-Hexanone	250	230		ug/L		92	57 - 139
4-Chlorotoluene	50.0	47.7		ug/L		95	78 - 122
4-Isopropyltoluene	50.0	51.5		ug/L		103	77 - 127
4-Methyl-2-pentanone (MIBK)	250	225		ug/L		90	67 - 130
Acetone	250	215		ug/L		86	39 - 160
Benzene	50.0	45.9		ug/L		92	79 - 120
Bromobenzene	50.0	47.8		ug/L		96	80 - 120
Bromoform	50.0	49.0		ug/L		98	66 - 130
Bromomethane	50.0	45.1		ug/L		90	53 - 141
Carbon disulfide	50.0	47.8		ug/L		96	64 - 133
Carbon tetrachloride	50.0	48.9		ug/L		98	72 - 136
Chlorobenzene	50.0	46.3		ug/L		93	82 - 118
Chlorobromomethane	50.0	46.7		ug/L		93	78 - 123
Chlorodibromomethane	50.0	47.9		ug/L		96	74 - 126
Chloroethane	50.0	47.4		ug/L		95	60 - 138
Chloroform	50.0	45.9		ug/L		92	79 - 124
Chloromethane	50.0	45.8		ug/L		92	50 - 139
cis-1,2-Dichloroethene	50.0	48.1		ug/L		96	78 - 123
cis-1,3-Dichloropropene	50.0	47.7		ug/L		95	75 - 124
Dibromomethane	50.0	48.5		ug/L		97	79 - 123
Dichlorobromomethane	50.0	46.7		ug/L		93	79 - 125
Dichlorodifluoromethane	50.0	58.1		ug/L		116	32 - 152
Ethylbenzene	50.0	47.8		ug/L		96	79 - 121
Ethylene Dibromide	50.0	48.3		ug/L		97	75 - 127
Hexachlorobutadiene	50.0	50.1		ug/L		100	66 - 134
Isopropylbenzene	50.0	48.7		ug/L		97	72 - 131
Methyl tert-butyl ether	50.0	45.0		ug/L		90	71 - 124
Methylene Chloride	50.0	41.5		ug/L		83	74 - 124
m-Xylene & p-Xylene	50.0	48.1		ug/L		96	80 - 121
Naphthalene	50.0	50.6		ug/L		101	61 - 128
n-Butylbenzene	50.0	52.0		ug/L		104	75 - 128
N-Propylbenzene	50.0	49.5		ug/L		99	76 - 126
o-Xylene	50.0	47.8		ug/L		96	78 - 122
sec-Butylbenzene	50.0	50.3		ug/L		101	77 - 126
Styrene	50.0	52.5		ug/L		105	78 - 123
tert-Butylbenzene	50.0	49.4		ug/L		99	78 - 124
Tetrachloroethene	50.0	49.3		ug/L		99	74 - 129
Toluene	50.0	46.7		ug/L		93	80 - 121
trans-1,2-Dichloroethene	50.0	44.7		ug/L		89	75 - 124
trans-1,3-Dichloropropene	50.0	46.7		ug/L		93	73 - 127
Trichloroethene	50.0	47.0		ug/L		94	79 - 123

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

Lab Sample ID: LCS 680-555967/4
Matrix: Water
Analysis Batch: 555967

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	50.0	51.3		ug/L		103	65 - 141
Vinyl acetate	100	106		ug/L		106	54 - 146
Vinyl chloride	50.0	48.3		ug/L		97	58 - 137
Xylenes, Total	100	95.9		ug/L		96	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*81 - 118*
4-Bromofluorobenzene (Surr)	*95*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
Toluene-d8 (Surr)	*94*		*89 - 112*

Lab Sample ID: LCSD 680-555967/5
Matrix: Water
Analysis Batch: 555967

Client Sample 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	49.1		ug/L		98	78 - 124	3	20
1,1,1-Trichloroethane	50.0	49.1		ug/L		98	74 - 131	4	20
1,1,2,2-Tetrachloroethane	50.0	46.9		ug/L		94	71 - 121	5	20
1,1,2-Trichloroethane	50.0	44.5		ug/L		89	80 - 119	3	20
1,1-Dichloroethane	50.0	48.9		ug/L		98	77 - 125	8	20
1,1-Dichloroethene	50.0	49.5		ug/L		99	71 - 131	5	20
1,1-Dichloropropene	50.0	51.3		ug/L		103	79 - 125	5	20
1,2,3-Trichlorobenzene	50.0	50.0		ug/L		100	69 - 129	4	20
1,2,3-Trichloropropane	50.0	44.3		ug/L		89	73 - 122	1	20
1,2,4-Trichlorobenzene	50.0	53.0		ug/L		106	69 - 130	4	20
1,2,4-Trimethylbenzene	50.0	52.0		ug/L		104	76 - 124	4	20
1,2-Dibromo-3-Chloropropane	50.0	42.1		ug/L		84	62 - 128	4	20
1,2-Dichlorobenzene	50.0	48.3		ug/L		97	80 - 119	5	20
1,2-Dichloroethane	50.0	49.1		ug/L		98	73 - 128	5	20
1,2-Dichloroethene, Total	100	97.9		ug/L		98	79 - 121	5	20
1,2-Dichloropropane	50.0	48.2		ug/L		96	78 - 122	3	20
1,3,5-Trimethylbenzene	50.0	51.6		ug/L		103	75 - 124	5	20
1,3-Dichlorobenzene	50.0	49.9		ug/L		100	80 - 119	5	20
1,3-Dichloropropane	50.0	48.6		ug/L		97	80 - 119	3	20
1,4-Dichlorobenzene	50.0	48.5		ug/L		97	79 - 118	5	20
2,2-Dichloropropane	50.0	52.8		ug/L		106	60 - 139	5	20
2-Butanone (MEK)	250	205		ug/L		82	56 - 143	2	20
2-Chlorotoluene	50.0	48.1		ug/L		96	79 - 122	4	20
2-Hexanone	250	239		ug/L		96	57 - 139	4	20
4-Chlorotoluene	50.0	49.7		ug/L		99	78 - 122	4	20
4-Isopropyltoluene	50.0	54.8		ug/L		110	77 - 127	6	20
4-Methyl-2-pentanone (MIBK)	250	233		ug/L		93	67 - 130	4	20
Acetone	250	210		ug/L		84	39 - 160	2	20
Benzene	50.0	47.6		ug/L		95	79 - 120	4	20
Bromobenzene	50.0	48.3		ug/L		97	80 - 120	1	20
Bromoform	50.0	49.8		ug/L		100	66 - 130	2	20
Bromomethane	50.0	50.6		ug/L		101	53 - 141	12	20

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

Lab Sample ID: LCSD 680-555967/5
Matrix: Water
Analysis Batch: 555967

Client Sample 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 disulfide			50.0	48.5		ug/L		97	64 - 133	1	20
Carbon tetrachloride			50.0	51.6		ug/L		103	72 - 136	5	20
Chlorobenzene			50.0	47.8		ug/L		96	82 - 118	3	20
Chlorobromomethane			50.0	48.6		ug/L		97	78 - 123	4	20
Chlorodibromomethane			50.0	49.5		ug/L		99	74 - 126	3	20
Chloroethane			50.0	51.1		ug/L		102	60 - 138	8	20
Chloroform			50.0	48.4		ug/L		97	79 - 124	5	20
Chloromethane			50.0	47.9		ug/L		96	50 - 139	4	20
cis-1,2-Dichloroethene			50.0	50.1		ug/L		100	78 - 123	4	20
cis-1,3-Dichloropropene			50.0	50.0		ug/L		100	75 - 124	5	20
Dibromomethane			50.0	49.3		ug/L		99	79 - 123	2	20
Dichlorobromomethane			50.0	48.4		ug/L		97	79 - 125	4	20
Dichlorodifluoromethane			50.0	60.6		ug/L		121	32 - 152	4	20
Ethylbenzene			50.0	50.0		ug/L		100	79 - 121	5	20
Ethylene Dibromide			50.0	50.3		ug/L		101	75 - 127	4	20
Hexachlorobutadiene			50.0	52.1		ug/L		104	66 - 134	4	20
Isopropylbenzene			50.0	51.0		ug/L		102	72 - 131	5	20
Methyl tert-butyl ether			50.0	45.4		ug/L		91	71 - 124	1	20
Methylene Chloride			50.0	43.0		ug/L		86	74 - 124	4	20
m-Xylene & p-Xylene			50.0	49.7		ug/L		99	80 - 121	3	20
Naphthalene			50.0	52.7		ug/L		105	61 - 128	4	20
n-Butylbenzene			50.0	55.2		ug/L		110	75 - 128	6	20
N-Propylbenzene			50.0	51.7		ug/L		103	76 - 126	4	20
o-Xylene			50.0	49.2		ug/L		98	78 - 122	3	20
sec-Butylbenzene			50.0	52.4		ug/L		105	77 - 126	4	20
Styrene			50.0	54.2		ug/L		108	78 - 123	3	20
tert-Butylbenzene			50.0	51.9		ug/L		104	78 - 124	5	20
Tetrachloroethene			50.0	51.3		ug/L		103	74 - 129	4	20
Toluene			50.0	49.0		ug/L		98	80 - 121	5	20
trans-1,2-Dichloroethene			50.0	47.8		ug/L		96	75 - 124	7	20
trans-1,3-Dichloropropene			50.0	48.5		ug/L		97	73 - 127	4	20
Trichloroethene			50.0	49.6		ug/L		99	79 - 123	5	20
Trichlorofluoromethane			50.0	54.3		ug/L		109	65 - 141	6	20
Vinyl acetate			100	110		ug/L		110	54 - 146	3	20
Vinyl chloride			50.0	51.5		ug/L		103	58 - 137	6	20
Xylenes, Total			100	98.9		ug/L		99	79 - 121	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*99*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
Toluene-d8 (Surr)	*97*		*89 - 112*

QC Association Summary

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

GC/MS VOA

Analysis Batch: 555967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-163405-1	G6M-18-01-JAN19	Total/NA	Water	8260B	
680-163405-2	G6M-18-02-JAN19	Total/NA	Water	8260B	
680-163405-3	AOC50-TB-011419	Total/NA	Water	8260B	
MB 680-555967/8	Method Blank	Total/NA	Water	8260B	
LCS 680-555967/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-555967/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: KOMAN Government Solutions, LLC
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

TestAmerica Job ID: 680-163405-1

Client Sample ID: G6M-18-01-JAN19

Lab Sample ID: 680-163405-1

Date Collected: 01/14/19 12:05

Matrix: Water

Date Received: 01/18/19 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	555967	01/23/19 14:37	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: G6M-18-02-JAN19

Lab Sample ID: 680-163405-2

Date Collected: 01/14/19 09:30

Matrix: Water

Date Received: 01/18/19 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	555967	01/23/19 15:00	Y1S	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: AOC50-TB-011419

Lab Sample ID: 680-163405-3

Date Collected: 01/14/19 00:00

Matrix: Water

Date Received: 01/18/19 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	555967	01/23/19 11:55	Y1S	TAL SAV
	Instrument ID: CMSB									

Laboratory References:

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

CHAIN-OF-CUSTODY RECORD

KOMAN Government Services, LLC
Laurie Ekes
293 Boston Post Road West, Suite 100, Marlborough, MA 01752
(508) 366.7442, add extension lekes@komangs.com

360325-Boston

COC #

360325-Boston

KGS

Project: Long Term Monitoring	**Laboratory:** TestAmerica Laboratories, Inc., Savannah, GA
Project Number: DEVNS-LTM	**Point of Contact:** Jerry Lanier, 912.354.7858, jerry.lanier@testamericainc.com
WBS Code: Purchase Order 18-706	**Ship to:** 5102 LaRoche Avenue, Savannah, GA 31404

Comments:

Equipment: 1.75" Bladder
Bonded 1/4" TLPE

Analytical Test Method

KOMAN, AOC 50 VOC Plume Delineation

	Sample ID	Matrix	Date	Time	Samp Init.	VOC by SW8260B	Location ID	Sample Type	Depth (ft bgs) Top - Bottom
1	G6M-18-01	WG	1/14/2019	1205	BrA	X			
2	G6M-18-02	WG	1/14/2019	0930	BrA	X			
3	AOC50-TB-011419	W	1/14/2019	—	BrA	X			
4									
5									
6									
7									
8									
9									
10									

Cooler: **Turn Around Time:**

680-163405 Chain of Custody

Relinquished by: *(Signature)*	Date	Time
[signature]	1/15/19	
[signature]	1/16/19	1600
[signature]	1-16-19	1810

Received by: *(Signature)*	Date	Time
[signature]	1/16/19	600
[signature]	1-16-19	1500
[signature]	1.17.19	0940

Shipping Date / Carrier / Airbill Number

Received by Laboratory: *(Signature, Date, Time)* **& condition**

3.6/3.6

Page 1 of 1

1/25/2019

Login Sample Receipt Checklist

Client: KOMAN Government Solutions, LLC

Job Number: 680-163405-1

Login Number: 163405

List Source: TestAmerica Savannah

List Number: 1

Creator: Laughlin, Paul 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?	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.	N/A	

Accreditation/Certification Summary

Client: KOMAN Government Solutions, LLC
TestAmerica Job ID: 680-163405-1
Project/Site: Devins LTM AOC 50 VOC Plume Delineation

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-19
Alaska	State Program	10		06-30-19
Alaska (UST)	State Program	10	UST-104	09-22-19
ANAB	DoD ELAP		L2463	09-22-19
ANAB	ISO/IEC 17025		L2463.01	09-22-19
Arizona	State Program	9	AZ0808	12-14-19
Arkansas DEQ	State Program	6	88-0692	02-01-19
California	State Program	9	2939	06-30-19
Colorado	State Program	8	N/A	12-31-19
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-19
GA Dept. of Agriculture	State Program	4	N/A	06-12-19
Georgia	State Program	4	N/A	06-30-19
Georgia	State Program	4	803	06-30-19
Guam	State Program	9	15-005r	04-17-19
Hawaii	State Program	9	N/A	06-30-19
Illinois	NELAP	5	200022	11-30-19
Indiana	State Program	5	N/A	06-30-19
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-18 *
Kentucky (UST)	State Program	4	18	06-30-19
Kentucky (WW)	State Program	4	90084	12-31-18 *
Louisiana	NELAP	6	30690	06-30-19
Louisiana (DW)	NELAP	6	LA160019	12-31-19
Maine	State Program	1	GA00006	09-25-20
Maryland	State Program	3	250	12-31-19
Massachusetts	State Program	1	M-GA006	06-30-19
Michigan	State Program	5	9925	03-05-19
Mississippi	State Program	4	N/A	06-30-19
Nebraska	State Program	7	TestAmerica-Savannah	06-30-19
New Jersey	NELAP	2	GA769	06-30-19
New Mexico	State Program	6	N/A	06-30-19
New York	NELAP	2	10842	03-31-19
North Carolina (DW)	State Program	4	13701	07-31-19
North Carolina (WW/SW)	State Program	4	269	12-31-19
Oklahoma	State Program	6	9984	08-31-19
Pennsylvania	NELAP	3	68-00474	06-30-19
Puerto Rico	State Program	2	GA00006	01-01-20
South Carolina	State Program	4	98001	06-30-18 *
Tennessee	State Program	4	TN02961	06-30-19
Texas	NELAP	6	T104704185-16-9	11-30-19
Texas (DW)	State Program	1	T104704185	06-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
Virginia	NELAP	3	460161	06-14-19
Washington	State Program	10	C805	06-10-19
West Virginia (DW)	State Program	3	9950C	12-31-18 *
West Virginia DEP	State Program	3	094	06-30-19
Wisconsin	State Program	5	999819810	08-31-19
Wyoming	State Program	8	8TMS-L	06-30-16 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

APPENDIX C
ANALYTICAL DATA VALIDATION REPORTS
(on CD)

C.1

Data Validation Reports
Spring 2018 LTM Event

Volatile Organic Compounds
SW-846 Method 8260B
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150689
Laboratory: Test America-Savannah, GA	Date: 4/26/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150689-1	Trip Blank_040318	4/3/2018	SW8260B/VOCs	Trip Blank
680-150689-2	XSA-12-96X-SPR18	4/3/2018	SW8260B/VOCs	Groundwater
680-150689-3	G6M-04-07X-SPR18	4/3/2018	SW8260B/VOCs	Groundwater
680-150689-4	G6M-97-05B-SPR18	4/3/2018	SW8260B/VOCs	Groundwater
680-150689-5	G6M-13-02X-SPR18	4/3/2018	SW8260B/VOCs	Groundwater
680-150689-6	G6M-04-02X-SPR18	4/3/2018	SW8260B/VOCs	Groundwater
680-150689-7	G6M-07-02X-SPR18	4/4/2018	SW8260B/VOCs	Groundwater
680-150689-8	G6M-DUP01-SPR18	4/4/2018	SW8260B/VOCs	Groundwater
680-150689-9	G6M-04-10A-SPR18	4/4/2018	SW8260B/VOCs	Groundwater
680-150689-10	G6M-13-01X-SPR18	4/4/2018	SW8260B/VOCs	Groundwater
680-150689-11	RB-01-SPR18	4/4/2018	SW8260B/VOCs	Rinsate Blank

Summary - Data validation was performed on the data for eight (8) groundwater samples, one (1) field duplicate sample, one (1) rinsate blank sample and one (1) trip blank sample collected from AOC 50 and submitted for Volatile Organic Compound (VOC) analyses by SW846 Method 8260B. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/5/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times –All samples were analyzed within the 14-day holding time required by for preserved aqueous samples.

Qualification: None required.

GC/MS Tuning - All BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria.

Qualification: None required.

Initial Calibration - Initial calibration curves reported with these samples exhibited acceptable %RSDs (≤15%) and average RRF (>0.050) values for all target compounds.

Qualification: None required.

Initial Calibration Verification (ICV): - Initial calibration verifications reported with these samples exhibited acceptable %Ds (≤30%) for all target VOC.

Qualification: None required.

Continuing Calibration Verification (CCV): - The %Ds for the CCVs analyzed and reported with these samples on 4/9 and 4/10/2018 were within acceptance limits (%Ds ≤30%) for all target VOCs.

Qualification: None required.

Surrogates – Surrogate percent recoveries were within the control limits for all samples.

Qualification: None required.

Internal Standard (IS) Area Performance: - Samples exhibited acceptable area counts for all internal standards.

Qualification: None required.

LCS/LCSD – Percent recoveries and RPDs for the LCS/LCDSs analyzed and reported with these samples were within laboratory control limits.

Qualification: None required.

MS/MSD – Matrix spike/matrix spike duplicate samples were not submitted with this sample set.

Qualification: None required.

Method Blank – The method blanks prepared and analyzed with these samples were free of contamination.

Qualification: None required.

Field Blanks – One Trip Blank sample, Trip Blank_040318 (Lab Sample ID: 680-150689-1), was submitted with this sample set. Target VOCs were non-detect in the TB sample.

One rinsate blank sample, RB-01-SPR18, (Lab Sample ID: 680-150689-11), was collected and submitted with these samples. Target VOCs were non-detect in the rinsate blank sample.

Qualification: None required.

Field Duplicate – Sample G6M-DUP01-SPR18 (Lab Sample ID: 680-150689-8) was the field duplicate sample of G6M-07-02X-SPR18 (Lab Sample ID: 680-15089-7). Both samples required analysis at dilution due to the presence of a high level non-target compound, which was detected in both samples. Sample G6M-07-02X-SPR18 was analyzed at five times (5X) dilution and sample G6M-DUP01-SPR18 was analyzed at a two times (2X) dilution. Therefore, several low-level target VOCs were reported at estimated concentrations (J) in the duplicate sample, G6M-DUP01-SPR18; but were diluted out and reported as non-detect in the native sample, G6M-07-02X-SPR18.

The FD sample results for the FD sample pair G6M-07-02X-SPR18/G6M-DUP01-SPR18 are summarized in the table below. The percent RPDs are calculated for the results detected in both samples. The calculated %RPDs between detected FD sample results were all less than 30%.

Lab Sample ID	680-150689-7		680-150689-8		
Client Sample ID	G6M-07-02X-SPR18		G6M-DUP01-SPR18		
Collection Date	4/4/2018		4/4/2018		
Dilution	5X		2X		
Analyte	**Result (µg/L)**	**Flag**	**Result (µg/L)**	**Flag**	**%RPD**
1,2,4-Trimethylbenzene	**2.7**	**J**	**3.1**		6.9
1,2-Dichloroethene, Total	**33**		**30**		9.5
1,3,5-Trimethylbenzene	2.5	U	0.71	J	NC
2-Butanone (MEK)	**61**		**76**		22
Acetone	50	U	680		NC
cis-1,2-Dichloroethene	**33**		**30**		9.5
Naphthalene	25	U	6.8	J	NC
n-Butylbenzene	**3.6**	**J**	**3.6**		0
N-Propylbenzene	5	U	0.80	J	NC
Tetrachloroethene	**350**		**360**		2.8
Toluene	5	U	1.1	J	NC
Trichloroethene	5	U	2.6		NC
Vinyl chloride	5	U	1.7	J	NC
m-Xylene & p-Xylene	5	U	1.5	J	NC
o-Xylene	2.5	U	0.93	J	NC
Xylenes, Total	2.5	U	2.4	J	NC

Qualification: None required.

Compound Quantitation – Four samples (G6M-97-05B, G6M-04-02X and the FD sample pair noted above) required analysis at dilution due high levels of chlorinated VOCs; reporting limits were adjusted accordingly. Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "LOD U." Analyte detections below the PQL were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The VOC results reported in this SDG are acceptable as reported. and may be used for their intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150689-1	Trip Blank_040318	SW8260B/VOCS	No qualifications needed.			
680-150689-2	XSA-12-96X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-3	G6M-04-07X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-4	G6M-97-05B-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-5	G6M-13-02X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-6	G6M-04-02X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-7	G6M-07-02X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-8	G6M-DUP01-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-9	G6M-04-10A-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-10	G6M-13-01X-SPR18	SW8260B/VOCS	No qualifications needed.			
680-150689-11	RB-01-SPR18	SW8260B/VOCS	No qualifications needed.			

Dissolved Metals
SW 846/6010C/6020A
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150689
Laboratory: Test America-Savannah, GA	Date: 4/26/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150689-2	XSA-12-96X-SPR18	4/3/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-3	G6M-04-07X-SPR18	4/3/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-4	G6M-97-05B-SPR18	4/3/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-5	G6M-13-02X-SPR18	4/3/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-6	G6M-04-02X-SPR18	4/3/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-7	G6M-07-02X-SPR18	4/4/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-8	G6M-DUP01-SPR18	4/4/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-9	G6M-04-10A-SPR18	4/4/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-10	G6M-13-01X-SPR18	4/4/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150689-11	RB-01-SPR18	4/4/2018	Total Metals (As, Fe, Mn)	Rinsate Blank

Summary – Data validation was performed on the data for eight (8) groundwater samples, one (1) field duplicate sample collected from AOC 50 and submitted for dissolved arsenic, iron and manganese analyses. One (1) rinsate blank sample was also collected and submitted for total metals analyses. Iron and manganese were analyzed and reported by method SW6010B and arsenic was analyzed and reported by method SW6020A. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/5/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the 6-month holding time required for preserved aqueous samples.

Qualification: None required.

Initial and Continuing Calibration Verification (ICV and CCV) – The ICVs and CCVs reported with these samples on 4/10 and 4/11/2018 were analyzed at the required frequencies and exhibited acceptable percent recoveries (%R ±10%) for all target analytes.

Qualification: None required.

Initial and Continuing Calibration Blanks (ICB and CCB) – The ICBs and CCBs reported with these samples were free of contamination.

Qualification: None required.

Laboratory Control Sample – The LCS recoveries (%R) for the reported target analytes met the laboratory control limits.

Qualification: None required.

MS/MSD – The laboratory selected sample G6M-DUP01-SPR18 (Lab Sample ID: 680-150689-8) to spike and analyze as matrix spike/matrix spike duplicate samples. The %Rs and RPDs were within control limits for arsenic. The native sample results for iron and manganese were greater than four (4) times the spike levels. The %Rs and RPDs could not be calculated; however, LCS recoveries were acceptable for all analytes.

Qualification: None required.

Method Blank – The method blanks associated and analyzed with these samples were non-detect for all target analytes.

Qualification: None required.

Field Blanks – One rinsate blank sample, RB-01-SPR18, (Lab Sample ID: 680-150689-11), was collected and submitted with these samples. Total metals were non-detect in the rinsate blank sample.

Qualification: None required.

Field Duplicate – Sample G6M-DUP01-SPR18 (Lab Sample ID: 680-150689-8) was the field duplicate sample of G6M-07-02X-SPR18 (Lab Sample ID: 680-15089-7). The FD sample results were comparable with %RPDs less than 10%. The FD sample results are summarized in the table below.

Lab Sample ID	680-150689-7	680-150689-8	
Client Sample ID	G6M-07-02X-SPR18	G6M-DUP01-SPR18	
Collection Date	4/4/2018	4/4/2018	
Analyte	**Result (µg/L)**	**Result (µg/L)**	**RPD (%)**
Iron	85,000	82,000	3.6
Manganese	2,800	2,700	3.6
Arsenic	89	83	7.0

Qualification: None required.

Compound Quantitation – Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "PQL U." Analyte detections below the PQL were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The dissolved metals results reported for the groundwater samples in this SDG are acceptable as reported and the data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150689-2	XSA-12-96X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-3	G6M-04-07X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-4	G6M-97-05B-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-5	G6M-13-02X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-6	G6M-04-02X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-7	G6M-07-02X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-8	G6M-DUP01-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-9	G6M-04-10A-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-10	G6M-13-01X-SPR18	Dissolved Metals	No qualifications needed.			
680-150689-11	RB-01-SPR18	Total Metals	No qualifications needed.			

Miscellaneous Parameters
Alkalinity (SM2320B), Nitrogen/nitrate (E353.2), Sulfate (SW9056A), Sulfide (SW9034) and Total Organic Carbon (TOC) (SW9060A)
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150689
Laboratory: Test America-Savannah, GA	Date: 4/26/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150689-4	G6M-97-05B-SPR18	4/3/2018	Miscellaneous Parameters	Groundwater
680-150689-5	G6M-13-02X-SPR18	4/3/2018	Miscellaneous Parameters	Groundwater
680-150689-6	G6M-04-02X-SPR18	4/3/2018	Miscellaneous Parameters	Groundwater
680-150689-7	G6M-07-02X-SPR18	4/4/2018	Miscellaneous Parameters	Groundwater
680-150689-8	G6M-DUP01-SPR18	4/4/2018	Miscellaneous Parameters	Groundwater
680-150689-9	G6M-04-10A-SPR18	4/4/2018	Miscellaneous Parameters	Groundwater
680-150689-10	G6M-13-01X-SPR18	4/4/2018	Miscellaneous Parameters	Groundwater
680-150689-11	RB-01-SPR18	4/4/2018	Miscellaneous Parameters	Rinsate Blank

Summary - Data validation was performed on the data for six (6) groundwater samples, one (1) field duplicate sample and one (1) rinsate blank sample submitted for the miscellaneous wet chemistry analyses listed above. Samples submitted for sulfate and sulfide were analyzed at Test America Savannah. The samples submitted for alkalinity, nitrate/nitrite and TOC analyses were shipped to Test America-Denver for analysis.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – All samples arrived intact at the laboratory on 4/5/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the respective holding times required for preserved aqueous samples.

Qualification: None required.

Method Blank – The method blanks prepared and analyzed for alkalinity, nitrate/nitrite, sulfide, sulfate and TOC were free from contamination. TOC was reported in the associated MB sample at 0.179J mg/L. The results for TOC in all samples, except for sample RB-10-SPR18, were greater than five (5) times the MB level.

Qualification: The result for TOC in the rinsate blank sample, RB-01-SPR18 (Lab Sample ID 680-150689-11) was qualified as non-detect (1.0 U).

Field Blanks – One rinsate blank, RB-01-SPR18, (Lab Sample ID: 680-150689-11) was collected and submitted with these samples. The results for all miscellaneous parameters were non-detect in the rinsate blank after qualification for MB sample results.

Qualification: None required.

Laboratory Control Sample – The LCS and/or LCSD %R results for all parameters met the control limits established by the QAPP.

Qualification: None required.

MS/MSD – MS/MSD samples were not submitted with this sample set. Samples G6M-97-05B-SPR18 and G6M-13-01X-SPR18 (Lab Sample IDs: 680-150689-4 and -10) were spiked and analyzed by the laboratory as matrix spike/duplicate samples for nitrate/nitrite. The %Rs and RPDs for the MS/MSDs were within laboratory control limits.

Qualification: None required.

Field Duplicate – Sample G6M-DUP01-SPR18 (Lab Sample ID: 680-150689-8) was the field duplicate sample of G6M-07-02X-SPR18 (Lab Sample ID: 680-15089-7). The results for sulfide and sulfate were non-detect in both samples.

The FD results for detected parameters were comparable with %RPDs less than 30%. FD results for the detected parameters are summarized in the table below.

Lab Sample ID	680-150689-7	680-150689-8	
Client Sample ID	G6M-07-02X-SPR18	G6M-DUP01-SPR18	
Collection Date	4/4/2018	4/4/2018	
Analyte	**Result (mg/L)**	**Result (mg/L)**	**RPD (%)**
Nitrate/Nitrite-N	0.13	0.11	16.6
TOC	580	480	18.9
Alkalinity	150	150	0

Qualification: None required.

Compound Quantitation – Three samples (G6M-04-10A and the FD sample pair noted above) were analyzed at dilution for TOC and sulfate; reporting limits were adjusted accordingly. The analyte non-detections were reported as "ND"; these results should be considered the equivalent of "PQL U." Analyte detections below the PQL were reported as J- qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The miscellaneous parameter results reported in this SDG are acceptable with the noted qualifications. The data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (mg/L)	Lab Qualifier	Validated Value (mg/L)	Validation Qualifier
680-150689-4	G6M-97-05B-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-5	G6M-13-02X-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-6	G6M-04-02X-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-7	G6M-07-02X-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-8	G6M-DUP01-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-9	G6M-04-10A-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-10	G6M-13-01X-SPR18	Miscellaneous Parameters	No qualifications needed.			
680-150689-11	RB-01-SPR18	TOC	0.58	J	1.0	U

Methane, Ethane, Ethene
RSK 175
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150689
Laboratory: Test America-Savannah, GA	Date: 4/26/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150689-4	G6M-97-05B-SPR18	4/3/2018	RSK-175/MEE	Groundwater
680-150689-5	G6M-13-02X-SPR18	4/3/2018	RSK-175/MEE	Groundwater
680-150689-6	G6M-04-02X-SPR18	4/3/2018	RSK-175/MEE	Groundwater
680-150689-7	G6M-07-02X-SPR18	4/4/2018	RSK-175/MEE	Groundwater
680-150689-8	G6M-DUP01-SPR18	4/4/2018	RSK-175/MEE	Groundwater
680-150689-9	G6M-04-10A-SPR18	4/4/2018	RSK-175/MEE	Groundwater
680-150689-10	G6M-13-01X-SPR18	4/4/2018	RSK-175/MEE	Groundwater
680-150689-11	RB-01-SPR18	4/4/2018	RSK-175/MEE	Rinsate Blank

Summary - Data validation was performed on the data for six (6) groundwater samples, one (1) field duplicate sample and one (1) rinsate blank sample collected and submitted for Methane, Ethane, Ethene analyses by Method RSK 175. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/5/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the 14-day holding time for preserved aqueous samples.

Qualification: None required.

Initial and Continuing Calibration Verification (ICV and CCV) – The ICVs and CCVs reported with these samples exhibited acceptable percent differences (%D ≤25%) for all target compounds.

Qualification: None required.

LCS/LCSD – The LCS/LCSD samples prepared and analyzed with these samples met the %R and RPD control limits for all compounds.

Qualification: None required.

MS/MSD – Matrix spike/matrix spike duplicate samples were not submitted with this sample set.

Qualification: None required.

Method Blank – The method blanks (MBs) prepared and analyzed with these samples were free of contamination.

Qualification: None required.

Field Blanks – One rinsate blank sample RB-01-SPR18, (Lab Sample ID: 680-150689-11) was collected and submitted with these samples. MEE were non-detect in the rinsate blank sample.

Qualification: None required.

Field Duplicate – Sample G6M-DUP01-SPR18 (Lab Sample ID: 680-150689-8) was the field duplicate sample of G6M-07-02X-SPR18 (Lab Sample ID: 680-15089-7).

Detected results were comparable in both sets of FD samples with %RPDs less than 30%. FD results are summarized in the table below.

Lab Sample ID	680-150689-7	680-150689-8	
Client Sample ID	G6M-07-02X-SPR18	G6M-DUP01-SPR18	
Collection Date	4/4/2018	4/4/2018	
Analyte	**Result (µg/L)**	**Result (µg/L)**	**RPD (%)**
Ethane	10	12	18.1
Ethene	17	17	0
Methane	25,000	33,000	27.6

Qualification: None required.

Compound Quantitation – The Flame Ionization Detector (FID) is used as the primary detector for methane, ethane, and ethene and is more sensitive than the Thermal Conductivity Detector (TCD). The TCD is used as the secondary detector for methane only. When the concentration of methane is above the calibration range of the FID, the TCD results are reported. Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "LOQ U." Analyte detections below the LOQ were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The RSK175 results reported in this SDG are acceptable as reported. The data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150689-4	G6M-97-05B-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-5	G6M-13-02X-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-6	G6M-04-02X-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-7	G6M-07-02X-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-8	G6M-DUP01-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-9	G6M-04-10A-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-10	G6M-13-01X-SPR18	RSK-175/MEE	No qualifications needed.			
680-150689-11	RB-01-SPR18	RSK-175/MEE	No qualifications needed.			

AOC 50 Spring 2018 Validated Data - SDG 680-150689

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-3	G6M-04-07X-SPR18	4/3/2018	6010C	Dissolved	Iron	50	ug/L	U	50	50	17	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	6010C	Dissolved	Manganese	2,100	ug/L		10	3	1	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	6020A	Dissolved	Arsenic	7.2	ug/L		3	3	1.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1,1-Trichloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.62	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1,2-Trichloroethane	0.50	ug/L	U	1	0.5	0.33	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethane	1.0	ug/L	U	1	1	0.38	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethene	1.0	ug/L	U	1	1	0.36	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloropropene	1.0	ug/L	U	1	1	0.34	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichloropropane	1.0	ug/L	U	1	1	0.39	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	2.0	ug/L	U	5	2	1.1	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichlorobenzene	1.0	ug/L	U	1	1	0.37	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethane	1.0	ug/L	U	1	1	0.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethene, Total	7.7	ug/L		2	1	0.74	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloropropane	1.0	ug/L	U	1	1	0.67	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	0.50	ug/L	U	1	0.5	0.31	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichlorobenzene	1.0	ug/L	U	1	1	0.43	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichloropropane	1.0	ug/L	U	1	1	0.34	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	1,4-Dichlorobenzene	1.0	ug/L	U	1	1	0.46	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	2,2-Dichloropropane	1.0	ug/L	U	1	1	0.37	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	2-Butanone (MEK)	10	ug/L	U	10	10	3.4	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	2-Chlorotoluene	0.50	ug/L	U	1	0.5	0.27	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	2-Hexanone	5.0	ug/L	U	10	5	2	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	4-Chlorotoluene	1.0	ug/L	U	1	1	0.45	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	4-Isopropyltoluene	1.0	ug/L	U	1	1	0.48	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	5.0	ug/L	U	10	5	2.1	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Acetone	7.9	ug/L	J	10	10	7	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Benzene	1.0	ug/L	U	1	1	0.43	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Bromobenzene	1.0	ug/L	U	1	1	0.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Bromoform	1.0	ug/L	U	1	1	0.43	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Bromomethane	5.0	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Carbon disulfide	2.0	ug/L	U	2	2	0.43	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Carbon tetrachloride	0.50	ug/L	U	1	0.5	0.33	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chlorobenzene	0.50	ug/L	U	1	0.5	0.26	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chlorobromomethane	1.0	ug/L	U	1	1	0.45	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chlorodibromomethane	0.50	ug/L	U	1	0.5	0.32	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chloroethane	5.0	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chloroform	1.0	ug/L	U	1	1	0.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Chloromethane	1.0	ug/L	U	1	1	0.4	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	cis-1,2-Dichloroethene	**7.7**	ug/L		1	1	0.41	1

AOC 50 Spring 2018 Validated Data - SDG 680-150689

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	cis-1,3-Dichloropropene	**1.0**	ug/L	U	1	1	0.4	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Dibromomethane	**1.0**	ug/L	U	1	1	0.35	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Dichlorobromomethane	**1.0**	ug/L	U	1	1	0.44	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Dichlorodifluoromethane	**1.0**	ug/L	U	1	1	0.6	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Ethylbenzene	**0.50**	ug/L	U	1	0.5	0.33	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Ethylene Dibromide	**1.0**	ug/L	U	1	1	0.44	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Hexachlorobutadiene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Isopropylbenzene	**1.0**	ug/L	U	1	1	0.35	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Methyl tert-butyl ether	**0.50**	ug/L	U	10	0.5	0.3	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Methylene Chloride	**5.0**	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	m-Xylene & p-Xylene	**1.0**	ug/L	U	1	1	0.35	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Naphthalene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	n-Butylbenzene	**1.0**	ug/L	U	1	1	0.47	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	N-Propylbenzene	**1.0**	ug/L	U	1	1	0.38	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	o-Xylene	**0.50**	ug/L	U	1	0.5	0.23	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	sec-Butylbenzene	**1.0**	ug/L	U	1	1	0.42	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Styrene	**0.50**	ug/L	U	1	0.5	0.27	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	tert-Butylbenzene	**1.0**	ug/L	U	1	1	0.45	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Tetrachloroethene	**4.2**	ug/L		1	1	0.74	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Toluene	**1.0**	ug/L	U	1	1	0.48	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	trans-1,2-Dichloroethene	**1.0**	ug/L	U	1	1	0.37	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	trans-1,3-Dichloropropene	**1.0**	ug/L	U	1	1	0.42	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Trichloroethene	**3.4**	ug/L		1	1	0.48	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Trichlorofluoromethane	**1.0**	ug/L	U	1	1	0.42	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Vinyl acetate	**2.0**	ug/L	U	2	2	0.81	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Vinyl chloride	**1.0**	ug/L	U	1	1	0.5	1
680-150689-3	G6M-04-07X-SPR18	4/3/2018	8260B	Total/NA	Xylenes, Total	0.50	ug/L	U	2	0.5	0.23	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.79	mg/L		0.1	0.05	0.019	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	6010C	Dissolved	Iron	50	ug/L	U	50	50	17	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	6010C	Dissolved	Manganese	1.4	ug/L	J	10	3	1	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	6020A	Dissolved	Arsenic	3.0	ug/L	U	3	3	1.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1,1-Trichloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.62	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1,2-Trichloroethane	0.50	ug/L	U	1	0.5	0.33	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethane	1.0	ug/L	U	1	1	0.38	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethene	1.0	ug/L	U	1	1	0.36	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloropropene	1.0	ug/L	U	1	1	0.34	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichloropropane	1.0	ug/L	U	1	1	0.39	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	2.0	ug/L	U	5	2	1.1	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichlorobenzene	1.0	ug/L	U	1	1	0.37	1

AOC 50 Spring 2018 Validated Data - SDG 680-150689

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethane	1.0	ug/L	U	1	1	0.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethene, Total	9.0	ug/L		2	1	0.74	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloropropane	1.0	ug/L	U	1	1	0.67	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	0.50	ug/L	U	1	0.5	0.31	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichlorobenzene	1.0	ug/L	U	1	1	0.43	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichloropropane	1.0	ug/L	U	1	1	0.34	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	1,4-Dichlorobenzene	1.0	ug/L	U	1	1	0.46	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	2,2-Dichloropropane	1.0	ug/L	U	1	1	0.37	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	2-Butanone (MEK)	10	ug/L	U	10	10	3.4	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	2-Chlorotoluene	0.50	ug/L	U	1	0.5	0.27	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	2-Hexanone	5.0	ug/L	U	10	5	2	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	4-Chlorotoluene	1.0	ug/L	U	1	1	0.45	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	4-Isopropyltoluene	1.0	ug/L	U	1	1	0.48	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	5.0	ug/L	U	10	5	2.1	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Acetone	10	ug/L	U	10	10	7	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Benzene	1.0	ug/L	U	1	1	0.43	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Bromobenzene	1.0	ug/L	U	1	1	0.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Bromoform	1.0	ug/L	U	1	1	0.43	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Bromomethane	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Carbon disulfide	2.0	ug/L	U	2	2	0.43	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Carbon tetrachloride	0.60	ug/L	J	1	0.5	0.33	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chlorobenzene	0.50	ug/L	U	1	0.5	0.26	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chlorobromomethane	1.0	ug/L	U	1	1	0.45	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chlorodibromomethane	0.50	ug/L	U	1	0.5	0.32	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chloroethane	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chloroform	1.0	ug/L	U	1	1	0.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Chloromethane	1.0	ug/L	U	1	1	0.4	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	cis-1,2-Dichloroethene	9.0	ug/L		1	1	0.41	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	cis-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.4	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Dibromomethane	1.0	ug/L	U	1	1	0.35	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Dichlorobromomethane	1.0	ug/L	U	1	1	0.44	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Dichlorodifluoromethane	1.0	ug/L	U	1	1	0.6	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Ethylbenzene	0.50	ug/L	U	1	0.5	0.33	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Ethylene Dibromide	1.0	ug/L	U	1	1	0.44	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Hexachlorobutadiene	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Isopropylbenzene	1.0	ug/L	U	1	1	0.35	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Methyl tert-butyl ether	0.50	ug/L	U	10	0.5	0.3	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Methylene Chloride	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	m-Xylene & p-Xylene	1.0	ug/L	U	1	1	0.35	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Naphthalene	5.0	ug/L	U	5	5	2.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	n-Butylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	N-Propylbenzene	1.0	ug/L	U	1	1	0.38	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	o-Xylene	0.50	ug/L	U	1	0.5	0.23	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	sec-Butylbenzene	1.0	ug/L	U	1	1	0.42	1

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Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Styrene	0.50	ug/L	U	1	0.5	0.27	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	tert-Butylbenzene	1.0	ug/L	U	1	1	0.45	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Toluene	1.0	ug/L	U	1	1	0.48	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	trans-1,2-Dichloroethene	1.0	ug/L	U	1	1	0.37	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	trans-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.42	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Trichloroethene	19	ug/L		1	1	0.48	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Trichlorofluoromethane	1.0	ug/L	U	1	1	0.42	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Vinyl acetate	2.0	ug/L	U	2	2	0.81	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Vinyl chloride	1.0	ug/L	U	1	1	0.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Xylenes, Total	0.50	ug/L	U	2	0.5	0.23	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	8260B	Total/NA	Tetrachloroethene	240	ug/L		2	2	1.5	2
680-150689-4	G6M-97-05B-SPR18	4/3/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	9056A	Total/NA	Sulfate	7.4	mg/L		1	1	0.4	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	9060A	Total/NA	Total Organic Carbon	1.5	mg/L		1	0.5	0.16	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	RSK-175	Total/NA	Ethylene	1.0	ug/L	U	1	1	0.5	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	RSK-175	Total/NA	Methane	34	ug/L		0.58	0.58	0.29	1
680-150689-4	G6M-97-05B-SPR18	4/3/2018	SM 2320B	Total/NA	Alkalinity	33	mg/L		5	3.2	1.1	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.35	mg/L		0.1	0.05	0.019	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	6010C	Dissolved	Iron	160	ug/L		50	50	17	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	6010C	Dissolved	Manganese	54	ug/L		10	3	1	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	6020A	Dissolved	Arsenic	3.0	ug/L	U	3	3	1.5	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	9056A	Total/NA	Sulfate	11	mg/L		1	1	0.4	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	9060A	Total/NA	Total Organic Carbon	6.8	mg/L		1	0.5	0.16	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	RSK-175	Total/NA	Ethylene	1.0	ug/L	U	1	1	0.5	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	RSK-175	Total/NA	Methane	6,300	ug/L		390	77	39	1
680-150689-5	G6M-13-02X-SPR18	4/3/2018	SM 2320B	Total/NA	Alkalinity	53	mg/L		5	3.2	1.1	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.10	mg/L		0.1	0.05	0.019	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	6010C	Dissolved	Iron	30,000	ug/L		50	50	17	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	6010C	Dissolved	Manganese	9,800	ug/L		10	3	1	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	6020A	Dissolved	Arsenic	99	ug/L		3	3	1.5	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	2.0	ug/L	U	2	2	0.74	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1,1-Trichloroethane	2.0	ug/L	U	2	2	0.74	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	2.0	ug/L	U	2	2	1.2	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1,2-Trichloroethane	1.0	ug/L	U	2	1	0.66	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethane	2.0	ug/L	U	2	2	0.76	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloroethene	2.0	ug/L	U	2	2	0.72	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,1-Dichloropropene	2.0	ug/L	U	2	2	0.68	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2,3-Trichloropropane	2.0	ug/L	U	2	2	0.78	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	2.0	ug/L	U	2	2	0.94	2

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Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	4.0	ug/L	U	10	4	2.2	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichlorobenzene	2.0	ug/L	U	2	2	0.74	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethane	2.0	ug/L	U	2	2	1	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloroethene, Total	19	ug/L		4	2	1.5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,2-Dichloropropane	2.0	ug/L	U	2	2	1.3	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	1.0	ug/L	U	2	1	0.62	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichlorobenzene	2.0	ug/L	U	2	2	0.86	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,3-Dichloropropane	2.0	ug/L	U	2	2	0.68	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	1,4-Dichlorobenzene	2.0	ug/L	U	2	2	0.92	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	2,2-Dichloropropane	2.0	ug/L	U	2	2	0.74	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	2-Butanone (MEK)	20	ug/L	U	20	20	6.8	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	2-Chlorotoluene	1.0	ug/L	U	2	1	0.54	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	2-Hexanone	10	ug/L	U	20	10	4	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	4-Chlorotoluene	2.0	ug/L	U	2	2	0.9	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	4-Isopropyltoluene	2.0	ug/L	U	2	2	0.96	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	20	10	4.2	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Acetone	20	ug/L	U	20	20	14	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Benzene	2.0	ug/L	U	2	2	0.86	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Bromobenzene	2.0	ug/L	U	2	2	1	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Bromoform	2.0	ug/L	U	2	2	0.86	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Bromomethane	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Carbon disulfide	4.0	ug/L	U	4	4	0.86	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Carbon tetrachloride	1.0	ug/L	U	2	1	0.66	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chlorobenzene	1.0	ug/L	U	2	1	0.52	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chlorobromomethane	2.0	ug/L	U	2	2	0.9	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chlorodibromomethane	1.0	ug/L	U	2	1	0.64	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chloroethane	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chloroform	2.0	ug/L	U	2	2	1	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Chloromethane	2.0	ug/L	U	2	2	0.8	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	cis-1,2-Dichloroethene	19	ug/L		2	2	0.82	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	cis-1,3-Dichloropropene	2.0	ug/L	U	2	2	0.8	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Dibromomethane	2.0	ug/L	U	2	2	0.7	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Dichlorobromomethane	2.0	ug/L	U	2	2	0.88	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Dichlorodifluoromethane	2.0	ug/L	U	2	2	1.2	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Ethylbenzene	1.0	ug/L	U	2	1	0.66	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Ethylene Dibromide	2.0	ug/L	U	2	2	0.88	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Hexachlorobutadiene	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Isopropylbenzene	2.0	ug/L	U	2	2	0.7	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Methyl tert-butyl ether	1.0	ug/L	U	20	1	0.6	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Methylene Chloride	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	m-Xylene & p-Xylene	2.0	ug/L	U	2	2	0.7	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Naphthalene	10	ug/L	U	10	10	5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	n-Butylbenzene	2.0	ug/L	U	2	2	0.94	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	N-Propylbenzene	2.0	ug/L	U	2	2	0.76	2

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Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	o-Xylene	1.0	ug/L	U	2	1	0.46	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	sec-Butylbenzene	2.0	ug/L	U	2	2	0.84	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Styrene	1.0	ug/L	U	2	1	0.54	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	tert-Butylbenzene	2.0	ug/L	U	2	2	0.9	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Tetrachloroethene	300	ug/L		2	2	1.5	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Toluene	2.0	ug/L	U	2	2	0.96	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	trans-1,2-Dichloroethene	2.0	ug/L	U	2	2	0.74	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	trans-1,3-Dichloropropene	2.0	ug/L	U	2	2	0.84	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Trichloroethene	74	ug/L		2	2	0.96	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Trichlorofluoromethane	2.0	ug/L	U	2	2	0.84	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Vinyl acetate	4.0	ug/L	U	4	4	1.6	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Vinyl chloride	1.7	ug/L	J	2	2	1	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	8260B	Total/NA	Xylenes, Total	1.0	ug/L	U	4	1	0.46	2
680-150689-6	G6M-04-02X-SPR18	4/3/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	9056A	Total/NA	Sulfate	11	mg/L		1	1	0.4	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	9060A	Total/NA	Total Organic Carbon	2.5	mg/L		1	0.5	0.16	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	RSK-175	Total/NA	Ethylene	3.4	ug/L		1	1	0.5	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	RSK-175	Total/NA	Methane	23,000	ug/L		390	77	39	1
680-150689-6	G6M-04-02X-SPR18	4/3/2018	SM 2320B	Total/NA	Alkalinity	120	mg/L		5	3.2	1.1	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.13	mg/L		0.1	0.05	0.019	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	6010C	Dissolved	Iron	85,000	ug/L		50	50	17	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	6010C	Dissolved	Manganese	2,800	ug/L		10	3	1	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	6020A	Dissolved	Arsenic	89	ug/L		3	3	1.5	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	9056A	Total/NA	Sulfate	10	mg/L	U	10	10	4	10
680-150689-7	G6M-07-02X-SPR18	4/4/2018	9060A	Total/NA	Total Organic Carbon	580	mg/L		21	10	3.2	20.83
680-150689-7	G6M-07-02X-SPR18	4/4/2018	RSK-175	Total/NA	Ethane	10	ug/L		1.1	1.1	0.55	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	RSK-175	Total/NA	Ethylene	17	ug/L		1	1	0.5	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	RSK-175	Total/NA	Methane	25,000	ug/L		390	77	39	1
680-150689-7	G6M-07-02X-SPR18	4/4/2018	SM 2320B	Total/NA	Alkalinity	150	mg/L		5	3.2	1.1	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.11	mg/L		0.1	0.05	0.019	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	6010C	Dissolved	Iron	82,000	ug/L		50	50	17	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	6010C	Dissolved	Manganese	2,700	ug/L		10	3	1	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	6020A	Dissolved	Arsenic	83	ug/L		3	3	1.5	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	2.0	ug/L	U	2	2	0.74	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1,1-Trichloroethane	2.0	ug/L	U	2	2	0.74	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	2.0	ug/L	U	2	2	1.2	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1,2-Trichloroethane	1.0	ug/L	U	2	1	0.66	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloroethane	2.0	ug/L	U	2	2	0.76	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloroethene	2.0	ug/L	U	2	2	0.72	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloropropene	2.0	ug/L	U	2	2	0.68	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2,3-Trichloropropane	2.0	ug/L	U	2	2	0.78	2

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Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	3.1	ug/L		2	2	0.94	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	4.0	ug/L	U	10	4	2.2	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichlorobenzene	2.0	ug/L	U	2	2	0.74	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloroethane	2.0	ug/L	U	2	2	1	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloroethene, Total	30	ug/L		4	2	1.5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloropropane	2.0	ug/L	U	2	2	1.3	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	0.71	ug/L	J	2	1	0.62	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,3-Dichlorobenzene	2.0	ug/L	U	2	2	0.86	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,3-Dichloropropane	2.0	ug/L	U	2	2	0.68	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	1,4-Dichlorobenzene	2.0	ug/L	U	2	2	0.92	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	2,2-Dichloropropane	2.0	ug/L	U	2	2	0.74	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	2-Butanone (MEK)	76	ug/L		20	20	6.8	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	2-Chlorotoluene	1.0	ug/L	U	2	1	0.54	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	2-Hexanone	10	ug/L	U	20	10	4	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	4-Chlorotoluene	2.0	ug/L	U	2	2	0.9	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	4-Isopropyltoluene	2.0	ug/L	U	2	2	0.96	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	20	10	4.2	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Acetone	680	ug/L		20	20	14	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Benzene	2.0	ug/L	U	2	2	0.86	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Bromobenzene	2.0	ug/L	U	2	2	1	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Bromoform	2.0	ug/L	U	2	2	0.86	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Bromomethane	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Carbon disulfide	4.0	ug/L	U	4	4	0.86	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Carbon tetrachloride	1.0	ug/L	U	2	1	0.66	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chlorobenzene	1.0	ug/L	U	2	1	0.52	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chlorobromomethane	2.0	ug/L	U	2	2	0.9	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chlorodibromomethane	1.0	ug/L	U	2	1	0.64	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chloroethane	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chloroform	2.0	ug/L	U	2	2	1	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Chloromethane	2.0	ug/L	U	2	2	0.8	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	cis-1,2-Dichloroethene	30	ug/L		2	2	0.82	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	cis-1,3-Dichloropropene	2.0	ug/L	U	2	2	0.8	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Dibromomethane	2.0	ug/L	U	2	2	0.7	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Dichlorobromomethane	2.0	ug/L	U	2	2	0.88	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Dichlorodifluoromethane	2.0	ug/L	U	2	2	1.2	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Ethylbenzene	1.0	ug/L	U	2	1	0.66	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Ethylene Dibromide	2.0	ug/L	U	2	2	0.88	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Hexachlorobutadiene	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Isopropylbenzene	2.0	ug/L	U	2	2	0.7	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Methyl tert-butyl ether	1.0	ug/L	U	20	1	0.6	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Methylene Chloride	10	ug/L	U	10	10	5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	m-Xylene & p-Xylene	1.5	ug/L	J	2	2	0.7	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Naphthalene	6.8	ug/L	J	10	10	5	2

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Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	n-Butylbenzene	3.6	ug/L		2	2	0.94	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	N-Propylbenzene	0.80	ug/L	J	2	2	0.76	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	o-Xylene	0.93	ug/L	J	2	1	0.46	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	sec-Butylbenzene	2.0	ug/L	U	2	2	0.84	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Styrene	1.0	ug/L	U	2	1	0.54	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	tert-Butylbenzene	2.0	ug/L	U	2	2	0.9	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Tetrachloroethene	360	ug/L		2	2	1.5	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Toluene	1.1	ug/L	J	2	2	0.96	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	trans-1,2-Dichloroethene	2.0	ug/L	U	2	2	0.74	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	trans-1,3-Dichloropropene	2.0	ug/L	U	2	2	0.84	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Trichloroethene	2.6	ug/L		2	2	0.96	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Trichlorofluoromethane	2.0	ug/L	U	2	2	0.84	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Vinyl acetate	4.0	ug/L	U	4	4	1.6	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Vinyl chloride	1.7	ug/L	J	2	2	1	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	8260B	Total/NA	Xylenes, Total	2.4	ug/L	J	4	1	0.46	2
680-150689-8	G6M-DUP01-SPR18	4/4/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	9056A	Total/NA	Sulfate	10	mg/L	U	10	10	4	10
680-150689-8	G6M-DUP01-SPR18	4/4/2018	9060A	Total/NA	Total Organic Carbon	480	mg/L		13	6.6	2	13.16
680-150689-8	G6M-DUP01-SPR18	4/4/2018	RSK-175	Total/NA	Ethane	12	ug/L		1.1	1.1	0.55	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	RSK-175	Total/NA	Ethylene	17	ug/L		1	1	0.5	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	RSK-175	Total/NA	Methane	33,000	ug/L		390	77	39	1
680-150689-8	G6M-DUP01-SPR18	4/4/2018	SM 2320B	Total/NA	Alkalinity	150	mg/L		5	3.2	1.1	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.17	mg/L		0.1	0.05	0.019	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	6010C	Dissolved	Iron	98,000	ug/L		50	50	17	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	6010C	Dissolved	Manganese	2,600	ug/L		10	3	1	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	6020A	Dissolved	Arsenic	250	ug/L		3	3	1.5	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	9056A	Total/NA	Sulfate	11	mg/L		10	10	4	10
680-150689-9	G6M-04-10A-SPR18	4/4/2018	9060A	Total/NA	Total Organic Carbon	19	mg/L		1	0.5	0.16	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	RSK-175	Total/NA	Ethylene	3.6	ug/L		1	1	0.5	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	RSK-175	Total/NA	Methane	25,000	ug/L		390	77	39	1
680-150689-9	G6M-04-10A-SPR18	4/4/2018	SM 2320B	Total/NA	Alkalinity	190	mg/L		5	3.2	1.1	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.05	mg/L	U	0.1	0.05	0.019	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	6010C	Dissolved	Iron	1,500	ug/L		50	50	17	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	6010C	Dissolved	Manganese	260	ug/L		10	3	1	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	6020A	Dissolved	Arsenic	10	ug/L		3	3	1.5	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	9056A	Total/NA	Sulfate	15	mg/L		1	1	0.4	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	9060A	Total/NA	Total Organic Carbon	1.8	mg/L		1	0.5	0.16	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	RSK-175	Total/NA	Ethylene	1.0	ug/L	U	1	1	0.5	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	RSK-175	Total/NA	Methane	3,200	ug/L		390	77	39	1
680-150689-10	G6M-13-01X-SPR18	4/4/2018	SM 2320B	Total/NA	Alkalinity	31	mg/L		5	3.2	1.1	1

AOC 50 Spring 2018 Validated Data - SDG 680-150689

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-11	RB-01-SPR18	4/4/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.05	mg/L	U	0.1	0.05	0.019	1
680-150689-11	RB-01-SPR18	4/4/2018	6010C	Dissolved	Iron	50	ug/L	U	50	50	17	1
680-150689-11	RB-01-SPR18	4/4/2018	6010C	Dissolved	Manganese	3.0	ug/L	U	10	3	1	1
680-150689-11	RB-01-SPR18	4/4/2018	6020A	Dissolved	Arsenic	3.0	ug/L	U	3	3	1.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1,1-Trichloroethane	1.0	ug/L	U	1	1	0.37	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.62	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1,2-Trichloroethane	0.50	ug/L	U	1	0.5	0.33	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloroethane	1.0	ug/L	U	1	1	0.38	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloroethene	**1.0**	ug/L	U	1	1	0.36	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,1-Dichloropropene	**1.0**	ug/L	U	1	1	0.34	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2,3-Trichloropropane	**1.0**	ug/L	U	1	1	0.39	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	**1.0**	ug/L	U	1	1	0.47	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	**2.0**	ug/L	U	5	2	1.1	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichlorobenzene	**1.0**	ug/L	U	1	1	0.37	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloroethane	**1.0**	ug/L	U	1	1	0.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloroethene, Total	**1.0**	ug/L	U	2	1	0.74	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,2-Dichloropropane	**1.0**	ug/L	U	1	1	0.67	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	**0.50**	ug/L	U	1	0.5	0.31	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,3-Dichlorobenzene	**1.0**	ug/L	U	1	1	0.43	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,3-Dichloropropane	**1.0**	ug/L	U	1	1	0.34	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	1,4-Dichlorobenzene	**1.0**	ug/L	U	1	1	0.46	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	2,2-Dichloropropane	**1.0**	ug/L	U	1	1	0.37	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	2-Butanone (MEK)	**10**	ug/L	U	10	10	3.4	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	2-Chlorotoluene	**0.50**	ug/L	U	1	0.5	0.27	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	2-Hexanone	**5.0**	ug/L	U	10	5	2	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	4-Chlorotoluene	**1.0**	ug/L	U	1	1	0.45	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	4-Isopropyltoluene	**1.0**	ug/L	U	1	1	0.48	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	**5.0**	ug/L	U	10	5	2.1	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Acetone	**10**	ug/L	U	10	10	7	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Benzene	**1.0**	ug/L	U	1	1	0.43	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Bromobenzene	**1.0**	ug/L	U	1	1	0.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Bromoform	**1.0**	ug/L	U	1	1	0.43	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Bromomethane	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Carbon disulfide	**2.0**	ug/L	U	2	2	0.43	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Carbon tetrachloride	**0.50**	ug/L	U	1	0.5	0.33	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chlorobenzene	**0.50**	ug/L	U	1	0.5	0.26	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chlorobromomethane	**1.0**	ug/L	U	1	1	0.45	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chlorodibromomethane	**0.50**	ug/L	U	1	0.5	0.32	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chloroethane	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chloroform	**1.0**	ug/L	U	1	1	0.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Chloromethane	**1.0**	ug/L	U	1	1	0.4	1

AOC 50 Spring 2018 Validated Data - SDG 680-150689

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	cis-1,2-Dichloroethene	**1.0**	ug/L	U	1	1	0.41	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	cis-1,3-Dichloropropene	**1.0**	ug/L	U	1	1	0.4	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Dibromomethane	**1.0**	ug/L	U	1	1	0.35	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Dichlorobromomethane	**1.0**	ug/L	U	1	1	0.44	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Dichlorodifluoromethane	**1.0**	ug/L	U	1	1	0.6	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Ethylbenzene	**0.50**	ug/L	U	1	0.5	0.33	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Ethylene Dibromide	**1.0**	ug/L	U	1	1	0.44	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Hexachlorobutadiene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Isopropylbenzene	**1.0**	ug/L	U	1	1	0.35	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Methyl tert-butyl ether	**0.50**	ug/L	U	10	0.5	0.3	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Methylene Chloride	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	m-Xylene & p-Xylene	**1.0**	ug/L	U	1	1	0.35	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Naphthalene	**5.0**	ug/L	U	5	5	2.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	n-Butylbenzene	**1.0**	ug/L	U	1	1	0.47	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	N-Propylbenzene	**1.0**	ug/L	U	1	1	0.38	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	o-Xylene	**0.50**	ug/L	U	1	0.5	0.23	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	sec-Butylbenzene	**1.0**	ug/L	U	1	1	0.42	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Styrene	**0.50**	ug/L	U	1	0.5	0.27	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	tert-Butylbenzene	**1.0**	ug/L	U	1	1	0.45	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Tetrachloroethene	**1.0**	ug/L	U	1	1	0.74	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Toluene	**1.0**	ug/L	U	1	1	0.48	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	trans-1,2-Dichloroethene	**1.0**	ug/L	U	1	1	0.37	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	trans-1,3-Dichloropropene	**1.0**	ug/L	U	1	1	0.42	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Trichloroethene	**1.0**	ug/L	U	1	1	0.48	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Trichlorofluoromethane	**1.0**	ug/L	U	1	1	0.42	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Vinyl acetate	**2.0**	ug/L	U	2	2	0.81	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Vinyl chloride	**1.0**	ug/L	U	1	1	0.5	1
680-150689-11	RB-01-SPR18	4/4/2018	8260B	Total/NA	Xylenes, Total	0.50	ug/L	U	2	0.5	0.23	1
680-150689-11	RB-01-SPR18	4/4/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150689-11	RB-01-SPR18	4/4/2018	9056A	Total/NA	Sulfate	1.0	mg/L	U	1	1	0.4	1
680-150689-11	RB-01-SPR18	4/4/2018	9060A	Total/NA	Total Organic Carbon	1.0	mg/L	U	1	0.5	0.16	1
680-150689-11	RB-01-SPR18	4/4/2018	RSK-175	Total/NA	Ethane	1.1	ug/L	U	1.1	1.1	0.55	1
680-150689-11	RB-01-SPR18	4/4/2018	RSK-175	Total/NA	Ethylene	1.0	ug/L	U	1	1	0.5	1
680-150689-11	RB-01-SPR18	4/4/2018	RSK-175	Total/NA	Methane	0.58	ug/L	U	0.58	0.58	0.29	1
680-150689-11	RB-01-SPR18	4/4/2018	SM 2320B	Total/NA	Alkalinity	3.2	mg/L	U	5	3.2	1.1	1

Notes:

Qualified Data

mg/l = milligram per liter

µg/L = microgram per liter

U = Non-detect

J = Estimated result

LOQ = Limit of Quantitation

LOD = Limit of Detection

DL = Method Detection Limit

Volatile Organic Compounds
SW-846 Method 8260B
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150815
Laboratory: Test America-Savannah, GA	Date: 4/27/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150815-1	G6M-13-04X_SPR18	4/5/2018	SW8260B/VOCs	Groundwater
680-150815-2	G6M-13-05X_SPR18	4/5/2018	SW8260B/VOCs	Groundwater
680-150815-3	Trip Blank1_040518	4/5/2018	SW8260B/VOCs	Trip Blank

Summary - Data validation was performed on the data for two (2) groundwater samples and one (1) trip blank sample collected from AOC 50 and submitted for Volatile Organic (VOC) analyses by SW846 Method 8260B. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/7/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times –All samples were analyzed within the 14-day holding time required by for preserved aqueous samples.

Qualification: None required.

GC/MS Tuning - All BFB tunes in the initial and continuing calibrations met the percent relative abundance criteria.

Qualification: None required.

Initial Calibration - Initial calibration curves reported with these samples exhibited acceptable %RSDs (≤15%) and average RRF (>0.050) values for all target compounds.

Qualification: None required.

Initial Calibration Verification (ICV): - Initial calibration verifications reported with these samples exhibited acceptable %Ds (≤30%) for all target VOC.

Qualification: None required.

Continuing Calibration Verification (CCV): - The %Ds for the CCVs analyzed and reported with these samples on 4/11/2018 were within acceptance limits (%Ds ≤30%) for all target VOCs.

Qualification: None required.

Surrogates – Surrogate percent recoveries were within the control limits for all samples.

Qualification: None required.

Internal Standard (IS) Area Performance: - Samples exhibited acceptable area counts for all internal standards.

Qualification: None required.

LCS/LCSD – The percent recoveries (%Rs) for naphthalene and 1,2,3-trichlorobenzene were above control limits from the LCSD sample; RPDs for these compounds were with control limits. Percent recoveries for all other VOCs and RPDs for all VOCs from the LCS/LCSD analyzed and reported with these samples were within laboratory control limits.

Qualification: None required.

MS/MSD – Sample G6M-13-04X (Lab Sample ID: 680-150815-1) was spiked and analyzed as MS/MSD samples. The MS/MSD RPDs for naphthalene and 1,2,3-trichlorobenzene were above 20%. Naphthalene and 1,2,3-trichlorobenzene were not detected in associated samples. Percent recoveries and RPDs for all other spiked VOCs were with MS/MSD control limits.

Qualification: None required.

Method Blank – The method blank prepared and analyzed with these samples was free of contamination.

Qualification: None required.

Field Blanks – One Trip Blank sample, Trip Blank1_040518, (Lab Sample ID: 680-150815-3), was submitted with this sample set. Chloromethane was reported in the TB at an estimated level of 0.51 µg/L; chloromethane was non-detect in all samples. All other target VOCs were non-detect in the TB sample.

Qualification: None required.

Field Duplicate – Field duplicate samples were not submitted with this sample set.

Qualification: None required.

Compound Quantitation – Sample G6M-13-05X (Lab Sample ID: 680-150815-2) required analysis at a ten times (10X) dilution due high levels of target VOCs; reporting limits were adjusted accordingly. Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "LOD U." Analyte detections below the PQL were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The VOC results reported in this SDG are acceptable as reported. and may be used for their intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150815-1	G6M-13-04X_SPR18	SW8260B/VOCs	No qualification needed.			
680-150815-2	G6M-13-05X_SPR18	SW8260B/VOCs	No qualification needed.			
680-150815-3	Trip Blank1_040518	SW8260B/VOCs	No qualification needed.			

Dissolved Metals
SW 846/6010C/6020A
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150815
Laboratory: Test America-Savannah, GA	Date: 4/27/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150815-1	G6M-13-04X_SPR18	4/5/2018	Dissolved Metals (As, Fe, Mn)	Groundwater
680-150815-2	G6M-13-05X_SPR18	4/5/2018	Dissolved Metals (As, Fe, Mn)	Groundwater

Summary – Data validation was performed on the data for two (2) groundwater samples collected from AOC 50 and submitted for dissolved arsenic, iron and manganese analyses. Iron and manganese were analyzed and reported by method SW6010B and arsenic was analyzed and reported by method SW6020A. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/7/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the 6-month holding time required for preserved aqueous samples.

Qualification: None required.

Initial and Continuing Calibration Verification (ICV and CCV) – The ICVs and CCVs reported with these samples on 4/11/2018 were analyzed at the required frequencies and exhibited acceptable percent recoveries (%R ±10%) for all target analytes.

Qualification: None required.

Initial and Continuing Calibration Blanks (ICB and CCB) – The ICBs and CCBs reported with these samples were free of contamination.

Qualification: None required.

Laboratory Control Samples – The LCS percent recoveries (%R) for the reported target analytes were within control limits.

Qualification: None required.

MS/MSD – Sample G6M-13-04X (Lab Sample ID: 680-150815-1) was spiked and analyzed as MS/MSD samples. The native sample results for iron and manganese were greater than four (4) times the spike levels. The %Rs and RPDs could not be calculated. The %R for arsenic from the MS sample was above control limits, the %R from the MSD and MS/MSD RPDs were within control limits. The LCS %Rs were within control limits for all analytes.

Qualification: None required.

Method Blank – The method blank (MB) associated and analyzed with these samples was non-detect for all target analytes.

Qualification: None required.

Field Blanks – Field blank samples were not submitted with this sample set.

Qualification: None required.

Field Duplicate – Field duplicate samples were not submitted with this sample set.

Qualification: None required.

Compound Quantitation – Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "PQL U." Analyte detections below the PQL were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The dissolved metals results reported in this SDG are acceptable as reported and the data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150815-1	G6M-13-04X_SPR18	Dissolved Metals	No qualification needed.			
680-150815-2	G6M-13-05X_SPR18	Dissolved Metals	No qualification needed.			

Miscellaneous Parameters
Alkalinity (SM2320B), Nitrogen/nitrate (E353.2), Sulfate (SW9056A), Sulfide (SW9034) and Total Organic Carbon (TOC) (SW9060A)
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150815
Laboratory: Test America-Savannah, GA	Date: 4/27/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150815-1	G6M-13-04X_SPR18	4/5/2018	Miscellaneous Parameters	Groundwater
680-150815-2	G6M-13-05X_SPR18	4/5/2018	Miscellaneous Parameters	Groundwater

Summary - Data validation was performed on the data for two (2) groundwater samples collected from AOC50 and submitted for the miscellaneous wet chemistry analyses listed above. Samples submitted for sulfate and sulfide were analyzed at Test America Savannah. The samples submitted for alkalinity, nitrate/nitrite and TOC analyses were shipped to Test America-Denver for analysis.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Qualification: None required.

Sample Delivery and Condition – All samples arrived intact at the laboratory on 4/7/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the respective holding times required for preserved aqueous samples.

Qualification: None required.

Method Blank – The method blanks prepared and analyzed for alkalinity. nitrate/nitrite, sulfide, sulfate and TOC were free from contamination. TOC was reported in the associated MB samples at 0.43 (associated with sample G6M-13-05X-SPR18) and 0.183 mg/L (associated with sample G6M-13-04X-SPR18). The results for TOC in associated samples were greater than five (5) times MB levels.

Qualification: None required.

Field Blanks – Field blank samples were not submitted with this sample set.

Qualification: None required.

Laboratory Control Sample – The LCS and/or LCSD %R results for all parameters met the laboratory control limits.

Qualification: None required.

MS/MSD – Sample G6M-13-04X-SPR18 (Lab Sample ID: 680-150815-1) was spiked and analyzed as MS/MSD samples. The %Rs and RPDs for all spiked analytes were within laboratory control limits.

Qualification: None required.

Field Duplicate – Field duplicate samples were not submitted with this sample set.

Qualification: None required.

Compound Quantitation – Sample G6M-13-05X-SPR18 was analyzed at dilution for TOC; reporting limits were adjusted accordingly. The analyte non-detections were reported as "ND"; these results should be considered the equivalent of "PQL U." Analyte detections below the PQL were reported as J- qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The miscellaneous parameter results reported in this SDG are acceptable with the noted qualifications. The data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (mg/L)	Lab Qualifier	Validated Value (mg/L)	Validation Qualifier
680-150815-1	G6M-13-04X_SPR18	Miscellaneous Parameters	No qualification needed.			
680-150815-2	G6M-13-05X_SPR18	Miscellaneous Parameters	No qualification needed.			

Methane, Ethane, Ethene
RSK 175
USEPA Level 2B Review

Site: AOC 50 Spring 2018 LTM	SDG #: 680-150815
Laboratory: Test America-Savannah, GA	Date: 4/27/2018
KGS Reviewer: Laurie Ekes	Project: 1082-052

Lab Sample ID	Client Sample ID	Collection Date	Analysis	Matrix
680-150815-1	G6M-13-04X_SPR18	4/5/2018	RSK-175/MEE	Groundwater
680-150815-2	G6M-13-05X_SPR18	4/5/2018	RSK-175/MEE	Groundwater

Summary - Data validation was performed on the data for two (2) groundwater samples collected and submitted for Methane, Ethane, Ethene analyses by Method RSK 175. All sample results in this SDG were subjected to Level 2B data validation, which includes evaluation of preparatory batch and instrument-related QC results.

Narrative and Completeness Review – The case narrative and data package were checked for completeness. No discrepancies were noted.

Sample Delivery and Condition – All samples arrived at the laboratory on 4/7/2018 in acceptable condition and temperature and were properly preserved. Proper custody was documented.

Qualification: None required.

Holding Times – All samples were analyzed within the 14-day holding time for preserved aqueous samples.

Qualification: None required.

Initial and Continuing Calibration Verification (ICV and CCV) – The ICVs and CCVs reported with these samples exhibited acceptable percent differences (%D ≤25%) for all target compounds.

Qualification: None required.

LCS/LCSD – The LCS/LCSD samples prepared and analyzed with these samples met the %R and RPD control limits for all compounds.

Qualification: None required.

MS/MSD – Sample G6M-13-04X (Lab Sample ID: 680-150815-1) was spiked and analyzed as MS/MSD samples. The %Rs and RPDs for ethene and ethane were within control limits.

Qualification: None required.

Method Blank – The method blank (MB) prepared and analyzed with these samples was free of contamination.

Qualification: None required.

Field Blanks – Field blank samples were not submitted with this sample set.

Qualification: None required.

Field Duplicate – Field duplicate samples were not submitted with this sample set.

Qualification: None required.

Compound Quantitation – The Flame Ionization Detector (FID) is used as the primary detector for methane, ethane, and ethene and is more sensitive than the Thermal Conductivity Detector (TCD). The TCD is used as the secondary detector for methane only. When the concentration of methane is above the calibration range of the FID, the TCD results are reported. Analyte non-detections were reported as "ND"; these results should be considered the equivalent of "LOQ U." Analyte detections below the LOQ were reported as J qualified results. These J qualifiers were retained unless superseded by a more severe qualifier.

Qualification: None required.

Qualification Summary Table - The RSK175 results reported in this SDG are acceptable as reported. The data may be used for its intended purpose.

Lab Sample ID	Client Sample ID	Analysis	Lab Value (µg/L)	Lab Qualifier	Validated Value (µg/L)	Validation Qualifier
680-150815-1	G6M-13-04X_SPR18	RSK-175/MEE	No qualification needed.			
680-150815-2	G6M-13-05X_SPR18	RSK-175/MEE	No qualification needed.			

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-1	G6M-13-04X_SPR18	4/5/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.062	mg/L	J	0.1	0.05	0.019	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	6010C	Dissolved	Iron	34,000	ug/L		50	50	17	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	6010C	Dissolved	Manganese	7,500	ug/L		10	3	1	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	6020A	Dissolved	Arsenic	350	ug/L		3	3	1.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.37	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1,1-Trichloroethane	1.0	ug/L	U	1	1	0.37	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.62	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1,2-Trichloroethane	0.50	ug/L	U	1	0.5	0.33	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloroethane	1.0	ug/L	U	1	1	0.38	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloroethene	1.0	ug/L	U	1	1	0.36	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloropropene	1.0	ug/L	U	1	1	0.34	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2,3-Trichloropropane	1.0	ug/L	U	1	1	0.39	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	2.0	ug/L	U	5	2	1.1	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichlorobenzene	1.0	ug/L	U	1	1	0.37	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloroethane	1.0	ug/L	U	1	1	0.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloroethene, Total	8.5	ug/L		2	1	0.74	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloropropane	1.0	ug/L	U	1	1	0.67	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	0.50	ug/L	U	1	0.5	0.31	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,3-Dichlorobenzene	1.0	ug/L	U	1	1	0.43	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,3-Dichloropropane	1.0	ug/L	U	1	1	0.34	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	1,4-Dichlorobenzene	1.0	ug/L	U	1	1	0.46	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	2,2-Dichloropropane	1.0	ug/L	U	1	1	0.37	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	2-Butanone (MEK)	10	ug/L	U	10	10	3.4	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	2-Chlorotoluene	0.50	ug/L	U	1	0.5	0.27	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	2-Hexanone	5.0	ug/L	U	10	5	2	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	4-Chlorotoluene	1.0	ug/L	U	1	1	0.45	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	4-Isopropyltoluene	1.0	ug/L	U	1	1	0.48	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	5.0	ug/L	U	10	5	2.1	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Acetone	10	ug/L	U	10	10	7	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Benzene	1.0	ug/L	U	1	1	0.43	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Bromobenzene	1.0	ug/L	U	1	1	0.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Bromoform	1.0	ug/L	U	1	1	0.43	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Bromomethane	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Carbon disulfide	2.0	ug/L	U	2	2	0.43	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Carbon tetrachloride	0.50	ug/L	U	1	0.5	0.33	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chlorobenzene	0.50	ug/L	U	1	0.5	0.26	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chlorobromomethane	1.0	ug/L	U	1	1	0.45	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chlorodibromomethane	0.50	ug/L	U	1	0.5	0.32	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chloroethane	3.5	ug/L	J	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chloroform	1.0	ug/L	U	1	1	0.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Chloromethane	1.0	ug/L	U	1	1	0.4	1

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	cis-1,2-Dichloroethene	6.9	ug/L		1	1	0.41	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	cis-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.4	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Dibromomethane	1.0	ug/L	U	1	1	0.35	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Dichlorobromomethane	1.0	ug/L	U	1	1	0.44	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Dichlorodifluoromethane	1.0	ug/L	U	1	1	0.6	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Ethylbenzene	0.50	ug/L	U	1	0.5	0.33	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Ethylene Dibromide	1.0	ug/L	U	1	1	0.44	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Hexachlorobutadiene	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Isopropylbenzene	1.0	ug/L	U	1	1	0.35	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Methyl tert-butyl ether	0.50	ug/L	U	10	0.5	0.3	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Methylene Chloride	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	m-Xylene & p-Xylene	1.0	ug/L	U	1	1	0.35	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Naphthalene	5.0	ug/L	U	5	5	2.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	n-Butylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	N-Propylbenzene	1.0	ug/L	U	1	1	0.38	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	o-Xylene	0.50	ug/L	U	1	0.5	0.23	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	sec-Butylbenzene	1.0	ug/L	U	1	1	0.42	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Styrene	0.50	ug/L	U	1	0.5	0.27	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	tert-Butylbenzene	1.0	ug/L	U	1	1	0.45	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Tetrachloroethene	1.0	ug/L	U	1	1	0.74	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Toluene	1.0	ug/L	U	1	1	0.48	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	trans-1,2-Dichloroethene	1.6	ug/L		1	1	0.37	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	trans-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.42	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Trichloroethene	4.1	ug/L		1	1	0.48	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Trichlorofluoromethane	1.0	ug/L	U	1	1	0.42	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Vinyl acetate	2.0	ug/L	U	2	2	0.81	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Vinyl chloride	8.6	ug/L		1	1	0.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	8260B	Total/NA	Xylenes, Total	0.50	ug/L	U	2	0.5	0.23	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	9056A	Total/NA	Sulfate	4.5	mg/L		1	1	0.4	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	9060A	Total/NA	Total Organic Carbon	1.8	mg/L		1	0.5	0.16	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	RSK-175	Total/NA	Ethane	8.6	ug/L		1.1	1.1	0.55	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	RSK-175	Total/NA	Ethylene	14	ug/L		1	1	0.5	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	RSK-175	Total/NA	Methane	20,000	ug/L		390	77	39	1
680-150815-1	G6M-13-04X_SPR18	4/5/2018	SM 2320B	Total/NA	Alkalinity	210	mg/L		5	3.2	1.1	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	353.2	Total/NA	Nitrate/Nitrite-N	0.10	mg/L		0.1	0.05	0.019	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	6010C	Dissolved	Iron	32,000	ug/L		50	50	17	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	6010C	Dissolved	Manganese	3,900	ug/L		10	3	1	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	6020A	Dissolved	Arsenic	85	ug/L		3	3	1.5	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	10	ug/L	U	10	10	3.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1,1-Trichloroethane	10	ug/L	U	10	10	3.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	10	ug/L	U	10	10	6.2	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1,2-Trichloroethane	5.0	ug/L	U	10	5	3.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloroethane	10	ug/L	U	10	10	3.8	10

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloroethene	10	ug/L	U	10	10	3.6	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,1-Dichloropropene	10	ug/L	U	10	10	3.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2,3-Trichloropropane	10	ug/L	U	10	10	3.9	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	10	ug/L	U	10	10	4.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	20	ug/L	U	50	20	11	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichlorobenzene	10	ug/L	U	10	10	3.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloroethane	10	ug/L	U	10	10	5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloroethene, Total	410	ug/L		20	10	7.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,2-Dichloropropane	10	ug/L	U	10	10	6.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	5.0	ug/L	U	10	5	3.1	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,3-Dichlorobenzene	10	ug/L	U	10	10	4.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,3-Dichloropropane	10	ug/L	U	10	10	3.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	1,4-Dichlorobenzene	10	ug/L	U	10	10	4.6	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	2,2-Dichloropropane	10	ug/L	U	10	10	3.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	2-Butanone (MEK)	71	ug/L	J	100	100	34	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	2-Chlorotoluene	5.0	ug/L	U	10	5	2.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	2-Hexanone	50	ug/L	U	100	50	20	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	4-Chlorotoluene	10	ug/L	U	10	10	4.5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	4-Isopropyltoluene	10	ug/L	U	10	10	4.8	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	50	ug/L	U	100	50	21	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Acetone	78	ug/L	J	100	100	70	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Benzene	10	ug/L	U	10	10	4.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Bromobenzene	10	ug/L	U	10	10	5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Bromoform	10	ug/L	U	10	10	4.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Bromomethane	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Carbon disulfide	20	ug/L	U	20	20	4.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Carbon tetrachloride	5.0	ug/L	U	10	5	3.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chlorobenzene	5.0	ug/L	U	10	5	2.6	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chlorobromomethane	10	ug/L	U	10	10	4.5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chlorodibromomethane	5.0	ug/L	U	10	5	3.2	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chloroethane	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chloroform	10	ug/L	U	10	10	5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Chloromethane	10	ug/L	U	10	10	4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	cis-1,2-Dichloroethene	410	ug/L		10	10	4.1	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	cis-1,3-Dichloropropene	10	ug/L	U	10	10	4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Dibromomethane	10	ug/L	U	10	10	3.5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Dichlorobromomethane	10	ug/L	U	10	10	4.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Dichlorodifluoromethane	10	ug/L	U	10	10	6	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Ethylbenzene	5.0	ug/L	U	10	5	3.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Ethylene Dibromide	10	ug/L	U	10	10	4.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Hexachlorobutadiene	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Isopropylbenzene	10	ug/L	U	10	10	3.5	10

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Methyl tert-butyl ether	5.0	ug/L	U	100	5	3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Methylene Chloride	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	m-Xylene & p-Xylene	10	ug/L	U	10	10	3.5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Naphthalene	50	ug/L	U	50	50	25	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	n-Butylbenzene	10	ug/L	U	10	10	4.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	N-Propylbenzene	10	ug/L	U	10	10	3.8	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	o-Xylene	5.0	ug/L	U	10	5	2.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	sec-Butylbenzene	10	ug/L	U	10	10	4.2	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Styrene	5.0	ug/L	U	10	5	2.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	tert-Butylbenzene	10	ug/L	U	10	10	4.5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Tetrachloroethene	59	ug/L		10	10	7.4	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Toluene	10	ug/L	U	10	10	4.8	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	trans-1,2-Dichloroethene	10	ug/L	U	10	10	3.7	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	trans-1,3-Dichloropropene	10	ug/L	U	10	10	4.2	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Trichloroethene	81	ug/L		10	10	4.8	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Trichlorofluoromethane	10	ug/L	U	10	10	4.2	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Vinyl acetate	20	ug/L	U	20	20	8.1	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Vinyl chloride	5.6	ug/L	J	10	10	5	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	8260B	Total/NA	Xylenes, Total	5.0	ug/L	U	20	5	2.3	10
680-150815-2	G6M-13-05X_SPR18	4/5/2018	9034	Total/NA	Sulfide	1.0	mg/L	U	1	1	1	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	9056A	Total/NA	Sulfate	0.95	mg/L	J	1	1	0.4	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	9060A	Total/NA	Total Organic Carbon	85	mg/L		2.4	1.2	0.37	2.38
680-150815-2	G6M-13-05X_SPR18	4/5/2018	RSK-175	Total/NA	Ethane	0.75	ug/L	J	1.1	1.1	0.55	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	RSK-175	Total/NA	Ethylene	1.1	ug/L		1	1	0.5	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	RSK-175	Total/NA	Methane	6,800	ug/L		390	77	39	1
680-150815-2	G6M-13-05X_SPR18	4/5/2018	SM 2320B	Total/NA	Alkalinity	77	mg/L		5	3.2	1.1	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1,1,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.37	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1,1-Trichloroethane	1.0	ug/L	U	1	1	0.37	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1,2,2-Tetrachloroethane	1.0	ug/L	U	1	1	0.62	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1,2-Trichloroethane	0.50	ug/L	U	1	0.5	0.33	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1-Dichloroethane	1.0	ug/L	U	1	1	0.38	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1-Dichloroethene	1.0	ug/L	U	1	1	0.36	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,1-Dichloropropene	1.0	ug/L	U	1	1	0.34	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2,3-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2,3-Trichloropropane	1.0	ug/L	U	1	1	0.39	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2,4-Trichlorobenzene	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2,4-Trimethylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2-Dibromo-3-Chloropropane	2.0	ug/L	U	5	2	1.1	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2-Dichlorobenzene	1.0	ug/L	U	1	1	0.37	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2-Dichloroethane	1.0	ug/L	U	1	1	0.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2-Dichloroethene, Total	1.0	ug/L	U	2	1	0.74	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,2-Dichloropropane	1.0	ug/L	U	1	1	0.67	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,3,5-Trimethylbenzene	0.50	ug/L	U	1	0.5	0.31	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,3-Dichlorobenzene	1.0	ug/L	U	1	1	0.43	1

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,3-Dichloropropane	1.0	ug/L	U	1	1	0.34	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	1,4-Dichlorobenzene	1.0	ug/L	U	1	1	0.46	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	2,2-Dichloropropane	1.0	ug/L	U	1	1	0.37	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	2-Butanone (MEK)	10	ug/L	U	10	10	3.4	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	2-Chlorotoluene	0.50	ug/L	U	1	0.5	0.27	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	2-Hexanone	5.0	ug/L	U	10	5	2	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	4-Chlorotoluene	1.0	ug/L	U	1	1	0.45	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	4-Isopropyltoluene	1.0	ug/L	U	1	1	0.48	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	4-Methyl-2-pentanone (MIBK)	5.0	ug/L	U	10	5	2.1	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Acetone	10	ug/L	U	10	10	7	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Benzene	1.0	ug/L	U	1	1	0.43	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Bromobenzene	1.0	ug/L	U	1	1	0.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Bromoform	1.0	ug/L	U	1	1	0.43	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Bromomethane	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Carbon disulfide	2.0	ug/L	U	2	2	0.43	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Carbon tetrachloride	0.50	ug/L	U	1	0.5	0.33	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chlorobenzene	0.50	ug/L	U	1	0.5	0.26	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chlorobromomethane	1.0	ug/L	U	1	1	0.45	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chlorodibromomethane	0.50	ug/L	U	1	0.5	0.32	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chloroethane	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chloroform	1.0	ug/L	U	1	1	0.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Chloromethane	0.51	ug/L	J	1	1	0.4	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	cis-1,2-Dichloroethene	1.0	ug/L	U	1	1	0.41	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	cis-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.4	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Dibromomethane	1.0	ug/L	U	1	1	0.35	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Dichlorobromomethane	1.0	ug/L	U	1	1	0.44	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Dichlorodifluoromethane	1.0	ug/L	U	1	1	0.6	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Ethylbenzene	0.50	ug/L	U	1	0.5	0.33	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Ethylene Dibromide	1.0	ug/L	U	1	1	0.44	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Hexachlorobutadiene	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Isopropylbenzene	1.0	ug/L	U	1	1	0.35	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Methyl tert-butyl ether	0.50	ug/L	U	10	0.5	0.3	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Methylene Chloride	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	m-Xylene & p-Xylene	1.0	ug/L	U	1	1	0.35	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Naphthalene	5.0	ug/L	U	5	5	2.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	n-Butylbenzene	1.0	ug/L	U	1	1	0.47	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	N-Propylbenzene	1.0	ug/L	U	1	1	0.38	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	o-Xylene	0.50	ug/L	U	1	0.5	0.23	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	sec-Butylbenzene	1.0	ug/L	U	1	1	0.42	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Styrene	0.50	ug/L	U	1	0.5	0.27	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	tert-Butylbenzene	1.0	ug/L	U	1	1	0.45	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Tetrachloroethene	1.0	ug/L	U	1	1	0.74	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Toluene	1.0	ug/L	U	1	1	0.48	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	trans-1,2-Dichloroethene	1.0	ug/L	U	1	1	0.37	1

AOC 50 Spring 2018 Validated Data - SDG 680-150815

Lab Sample ID	Client Sample ID	Collection Date	Method	Prep Type	Analyte	Result	Unit	Flag	LOQ	LOD	DL	Dilution Factor
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	trans-1,3-Dichloropropene	1.0	ug/L	U	1	1	0.42	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Trichloroethene	1.0	ug/L	U	1	1	0.48	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Trichlorofluoromethane	1.0	ug/L	U	1	1	0.42	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Vinyl acetate	2.0	ug/L	U	2	2	0.81	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Vinyl chloride	1.0	ug/L	U	1	1	0.5	1
680-150815-3	Trip Blank1_040518	4/5/2018	8260B	Total/NA	Xylenes, Total	0.50	ug/L	U	2	0.5	0.23	1

Notes:
mg/l = milligram per liter
µg/L = microgram per liter
U = Non-detect
J = Estimated result
LOQ = Limit of Quantitation
LOD = Limit of Detection
DL = Method Detection Limit

C.2

Data Validation Reports
Fall 2018 LTM Event

Data Validation Report for 6801593591

Facility:	Long Term Monitoring
Event:	KOMAN, Long Term Monitoring, AOC 50 Fall 2018
SDG:	6801593591
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Arvada, CO
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2B
Primary Data Reviewer:	Sherri Pullar, Data Validation Chemist
Second Reviewer:	Laurie Ekes, Senior Scientist
Date Submitted:	January 08, 2019

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP03_FAL18	680-159359-2	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-04-10A_FAL18	680-159359-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-10X_FAL18	680-159359-4	Water	Field Sample/N						X			
G6M-07-02X_FAL18	680-159359-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-05X_FAL18	680-159359-6	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-95-19X_FAL18	680-159359-7	Water	Field Sample/N						X			
G6M-95-20X_FAL18	680-159359-8	Water	Field Sample/N				X	X	X			
G6M-TB01	680-159359-5	Water	Trip Blank/TB						X			
G6M-TB02	680-159359-9	Water	Trip Blank/TB						X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Arvada, CO and were reported under sample delivery group (SDG) 6801593591. 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
- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- 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 10 results (1.52%) out of the 659 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG contained 6 field samples, 1 FD sample and 2 TB samples.

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.

Sherri A Pullar

January 08, 2019

Reviewed by Sherri Pullar, Data Validation Chemist, KOMAN Government Solutions, LLC

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.

January 08, 2019

Reviewed by Laurie Ekes, Senior Scientist, KOMAN Government Solutions, LLC

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, 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 280-434438/22 (LB)/ MB 280-434438/22	Nitrate-Nitrite (as N)	0.02240	< 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 Blank for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-05X_FAL18	N	Nitrate-Nitrite (as N)	0.100	0.0640 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).
In instances where no LOD is provided, results are reported down to the LOQ.

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 280-434438/37 (CB)/ CCB 280-434438/37	Nitrate-Nitrite (as N)	0.05770	< 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
G6M-04-10A_FAL18	N	Nitrate-Nitrite (as N)	0.150	0.150 J1	0.150 UJ		mg/l	B2/M
G6M-13-05X_FAL18	N	Nitrate-Nitrite (as N)	0.100	0.0640 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).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E353.2, 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-07-02X_FAL18 (N)/ 680-159359-2	Nitrate-Nitrite (as N)	0.4200	< 0.1	< 0.1	mg/l	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP03_FAL18	FD	Nitrate-Nitrite (as N)	0.100	0.850	0.850 J		mg/l	D3
G6M-07-02X_FAL18	N	Nitrate-Nitrite (as N)	0.100	0.430	0.430 J		mg/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E353.2, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A_FAL18 (MS)/ 680-159359-3	Nitrate-Nitrite (as N)	51.50	90 - 110	10 - 110	percent	J/UJ	M	
G6M-04-10A_FAL18 (SD)/ 680-159359-3	Nitrate-Nitrite (as N)	52.50	90 - 110	10 - 110	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for E353.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A_FAL18	N	Nitrate-Nitrite (as N)	0.150	0.150 J1	0.150 UJ		mg/l	B2/M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
LCSD 680-544664/11 (BD)/ LCSD 680-544664/11	Methane	158.3	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-544664/8 (BD)/ LCSD 680-544664/8	Methane	158.7	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-545261/20 (BD)/ LCSD 680-545261/20	Methane	173.0	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-545261/22 (BD)/ LCSD 680-545261/22	Methane	172.8	< 30	< 30	rpd	J/UJ	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A_FAL18 (MS)/ 680-159359-3	Iron	0.000	87 - 115	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-10A_FAL18 (SD)/ 680-159359-3	Iron	0.000	87 - 115	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-10A_FAL18 (MS)/ 680-159359-3	Manganese	38.00	90 - 114	10 - 125	percent	J/UJ	M	Spike amount Insignificant
G6M-04-10A_FAL18 (SD)/ 680-159359-3	Manganese	40.00	90 - 114	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
CCV 680-545027/2 (CV)/ CCV 680-545027/2	Bromomethane	162.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545027/2 (CV)/ CCV 680-545027/2	Vinyl acetate	77.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545027/2 (CV)/ CCV 680-545027/2	2-Butanone (MEK)	79.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-544987/30 (CV)/ CCVC 680-544987/30	Vinyl acetate	66.10	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-544987/30 (CV)/ CCVC 680-544987/30	2,2-Dichloropropane	74.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545027/30 (CV)/ CCVC 680-545027/30	Bromomethane	130.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545027/30 (CV)/ CCVC 680-545027/30	Vinyl acetate	73.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVIS 680-544987/3 (CV)/ CCVIS 680-544987/3	Bromomethane	130.4	80 - 120	80 - 120	percent	J/None	V2	
CCVIS 680-544987/3 (CV)/ CCVIS 680-544987/3	Vinyl acetate	75.40	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.

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 680-544987/5 (BS)/ LCS 680-544987/5	Bromomethane	146.6	53 - 141	10 - 141	percent	J/None	C	
LCS 680-545027/3 (BS)/ LCS 680-545027/3	Bromomethane	142.8	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-545027/4 (BD)/ LCSD 680-545027/4	Bromomethane	150.2	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, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A_FAL18 (MS)/ 680-159359-3	1,2,3-Trichlorobenzene	60.20	69 - 129	10 - 129	percent	J/UJ	M	
G6M-04-10A_FAL18 (MS)/ 680-159359-3	1,2,4-Trichlorobenzene	65.20	69 - 130	10 - 130	percent	J/UJ	M	
G6M-04-10A_FAL18 (MS)/ 680-159359-3	sec-Butylbenzene	66.40	77 - 126	10 - 126	percent	J/UJ	M	
G6M-04-10A_FAL18 (SD)/ 680-159359-3	1,2,3-Trichlorobenzene	66.80	69 - 129	10 - 129	percent	J/UJ	M	
G6M-04-10A_FAL18 (MS)/ 680-159359-3	tert-Butylbenzene	69.00	78 - 124	10 - 124	percent	J/UJ	M	
G6M-04-10A_FAL18 (SD)/ 680-159359-3	sec-Butylbenzene	70.00	77 - 126	10 - 126	percent	J/UJ	M	
G6M-04-10A_FAL18 (MS)/ 680-159359-3	n-Butylbenzene	71.80	75 - 128	10 - 128	percent	J/UJ	M	
G6M-04-10A_FAL18 (SD)/ 680-159359-3	tert-Butylbenzene	73.40	78 - 124	10 - 124	percent	J/UJ	M	
G6M-04-10A_FAL18 (MS)/ 680-159359-3	1,2,4-Trimethylbenzene	75.20	76 - 124	10 - 124	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 SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-10A_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U J1	5.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U J1	5.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	n-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	sec-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	tert-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260B, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-10A_FAL18 (SD)/ 680-159359-3	Bromomethane	26.11	< 20	< 20	rpd	J/None	D	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9060A, 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 280-434876/4 (LB)/ MB 280-434876/4	Total Organic Carbon	0.2610	< 0.16	< 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: E353.2	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP03_FAL18	FD	Nitrate-Nitrite (as N)	0.100	0.850	0.850 J		mg/l	D3
G6M-04-10A_FAL18	N	Nitrate-Nitrite (as N)	0.150	0.150 J1	0.150 UJ		mg/l	B2/M
G6M-07-02X_FAL18	N	Nitrate-Nitrite (as N)	0.100	0.430	0.430 J		mg/l	D3
G6M-13-05X_FAL18	N	Nitrate-Nitrite (as N)	0.100	0.0640 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
G6M-04-10A_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U J1	5.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U J1	5.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	n-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	sec-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M
G6M-04-10A_FAL18	N	tert-Butylbenzene	1.00	1.00 U J1	1.00 UJ		ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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-DUP03_FAL18	FD	Methane	390	20000	20000 J	20000	
G6M-04-10A_FAL18	N	Methane	390	32000	32000 J	32000	
G6M-07-02X_FAL18	N	Methane	390	25000	25000 J	25000	
G6M-13-05X_FAL18	N	Methane	390	16000	16000 J	16000	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP03_FAL18	FD	2-Butanone (MEK)	50.0	110 D	110 J	110	
AOC50-DUP03_FAL18	FD	Vinyl acetate	10.0	10.0 U M	10.0 UJ	10.0 U	
G6M-04-10A_FAL18	N	2-Butanone (MEK)	10.0	13.0	13.0 J	13.0	
G6M-04-10A_FAL18	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-10X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-10X_FAL18	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-07-02X_FAL18	N	2-Butanone (MEK)	50.0	98.0 D	98.0 J	98.0	
G6M-07-02X_FAL18	N	Vinyl acetate	10.0	10.0 U M	10.0 UJ	10.0 U	
G6M-95-19X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-19X_FAL18	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-95-20X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-95-20X_FAL18	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-TB01	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-TB01	TB	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-TB02	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-TB02	TB	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).
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
B2	CCB
C	LCS Recovery
D	MS RPD
D3	Field Duplicate RPD
L	Lab Blank
M	MS Recovery
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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spls -1/-2 were the FD pair
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?		•		

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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl -3 was prepared and analyzed for MS/MSD
Were MS/MSD recoveries within project acceptance limits?		•		See outlier report
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		pls -1/-2 were the FD pair; see FD report and outlier report
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?		•		

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?		•		
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?	•			See outlier report; RPD's were within QC limits. Qualifiers were removed.
Was a MS/MSD pair prepared with each batch?	•			Spl -3 was prepared and analyzed for MS/MSD
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?	•			Spls -1/-2 were the FD pair
Were QAPP specified laboratory LOQs/RLs achieved?		•		Sample results required dilutions; see outlier report.
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?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl -3 was prepared and analyzed for MS/MSD
Were MS/MSD recoveries within project acceptance limits?	•			Sample results were >4X the spike amounts; no qualifiers were applied; see outlier report
Was the MS/MSD RPD within project acceptance limits?	•			
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			Spls -1/-2 were the FD pair
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?		•		

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?	•			LCS only
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?	•			Spls -1/-2 were the FD pair
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?		•		

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?		•		See outlier report
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?	•			Spl -5 and -9 were TB 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?	•			see outlier report
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			Spl -3 was prepared and analyzed for MS/MSD
Were MS/MSD recoveries within project acceptance limits?		•		See outlier report
Was the MS/MSD RPD within project acceptance limits?		•		See outlier report
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Spls -1/-2 were the FD pair; see FD report and outlier report
Were QAPP specified laboratory LOQs/RLs achieved?		•		Sample results required dilutions; see outlier report
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?		•		

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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			Spls -1/-2 were the FD pair
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?		•		

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?		•		
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?	•			Spl -3 was prepared and analyzed for MS/MSD
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?	•			Spls -1/-2 were the FD pair
Were QAPP specified laboratory LOQs/RLs achieved?		•		Results required dilutions; see outlier report
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl -3 was prepared and analyzed for MS/MSD
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?	•			Spls -1/-2 were the FD pair
Were QAPP specified laboratory LOQs/RLs achieved?		•		Sample results required dilutions; see outlier report
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

Field Duplicate Report By SDG
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801593591

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Alkalinity, Total (as CaCO3)	400	400	5.00	0.00	30	OK	NA

Location	Analysis
G6M-07-02X	E353.2

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Nitrate-Nitrite (as N)	0.430	0.850	0.100	65.6	30	NA	0.42

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Ethane	14.0	12.0	1.10	15.4	30	OK	NA
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Ethene	43.0	39.0	1.00	9.76	30	OK	NA
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Methane	25000	20000	390	22.2	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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Iron (FLDFLT)	370000	390000	50.0	5.26	30	OK	NA
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Manganese (FLDFLT)	6100	6400	10.0	4.80	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801593591

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Arsenic (FLDFLT)	69.0	71.0	3.00	2.86	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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1,1,2-Tetrachloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1,1-Trichloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1,2,2-Tetrachloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1,2-Trichloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1-Dichloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1-Dichloroethene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,1-Dichloropropene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2,3-Trichlorobenzene	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2,3-Trichloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2,4-Trichlorobenzene	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2,4-Trimethylbenzene	2.50	2.90	5.00	14.8	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dibromo-3-chloropropane	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dibromoethane (EDB)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dichloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dichloroethene	110	110	10.0	0.00	30	OK	NA
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,2-Dichloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,3,5-Trimethylbenzene	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801593591

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,3-Dichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,3-Dichloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	1,4-Dichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	2,2-Dichloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	2-Butanone (MEK)	98.0	110	50.0	11.5	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	2-Chlorotoluene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	2-Hexanone	ND	ND	50.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	4-Chlorotoluene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	4-Methyl-2-pentanone (MIBK)	ND	ND	50.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Acetone	77.0	95.0	50.0	20.9	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Benzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Bromobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Bromochloromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Bromodichloromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Bromoform	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Bromomethane	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Carbon disulfide	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Carbon tetrachloride	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Chlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Chloroethane	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Chloroform	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Chloromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	cis-1,2-Dichloroethene	110	110	5.00	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"

Field Duplicate Report By SDG
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801593591

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	cis-1,3-Dichloropropene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Dibromochloromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Dibromomethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Dichlorodifluoromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Ethylbenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Hexachlorobutadiene	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Isopropylbenzene (Cumene)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	m,p-Xylene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Methyl tert-butyl ether (MTBE)	ND	ND	50.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Methylene chloride	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	n-Butylbenzene	2.60	3.50	5.00	29.5	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	n-Propylbenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Naphthalene	ND	ND	25.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	o-Xylene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	p-Cymene (p-Isopropyltoluene)	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	sec-Butylbenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Styrene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	tert-Butylbenzene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Tetrachloroethene (PCE)	370	430	5.00	15.0	30	OK	NA
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Toluene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	trans-1,2-Dichloroethene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	trans-1,3-Dichloropropene	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Trichloroethene (TCE)	4.10	4.30	5.00	4.76	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801593591

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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Trichlorofluoromethane	ND	ND	5.00	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Vinyl acetate	ND	ND	10.0	NA	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Vinyl chloride	3.30	4.20	5.00	24.0	30	NA	OK
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Xylenes, Total	ND	ND	10.0	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9034

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Sulfide	ND	ND	1.00	NA	30	NA	OK

Location	Analysis
G6M-07-02X	SW9056A

Field ID - Primary/Field Dup	Lab ID - Primary/Field Dup	Analyte	Primary Result	FD Result	RL	RPD	RPD Criteria	RPD Check	RL Check
G6M-07-02X_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Sulfate	6.60	ND	10.0	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_FAL18 / AOC50-DUP03_FAL18	680-159359-1 / 680-159359-2	Total Organic Carbon	1300	1300	35.0	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"

Data Validation Report for 6801594941

Facility:	Long Term Monitoring
Event:	KOMAN, Long Term Monitoring, AOC 50 Fall 2018
SDG:	6801594941
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Savannah, GA
Data Review Contractor:	KOMAN Government Solutions
Data Review Level:	2B
Primary Data Reviewer:	Sherri Pullar, Data Validation Chemist
Second Reviewer:	Laurie Ekes, Senior Scientist

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
G6M-02-08X_FAL18	680-159494-2	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-09X_FAL18	680-159494-5	Water	Field Sample/N				X	X	X			
G6M-04-13X_FAL18	680-159494-1	Water	Field Sample/N						X			
G6M-04-15X_FAL18	680-159494-6	Water	Field Sample/N				X	X	X			
G6M-13-06X_FAL18	680-159494-4	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-EB01_FAL18	680-159494-3	Water	Equipment Blank/EB				X	X	X			
G6M-TB03_FAL18	680-159494-7	Water	Trip Blank/TB						X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Arvada, CO and were reported under sample delivery group (SDG) 6801594941. 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
- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab 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 0 results (0.00%) out of the 507 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG contains 5 samples, 1 equipment blank, and one trip blank

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.

Sherri A Pullar

December 17, 2018

Reviewed by Sherri Pullar, Data Validation Chemist, KOMAN Government Solutions

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.

December 29, 2018

Reviewed by Laurie Ekes, Senior Scientist, KOMAN Government Solutions

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD 680-545425/4 (BD)/ LCSD 680-545425/4	Methane	173.4	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-545425/7 (BD)/ LCSD 680-545425/7	Methane	173.5	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-545609/4 (BD)/ LCSD 680-545609/4	Methane	172.5	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-545609/7 (BD)/ LCSD 680-545609/7	Methane	171.0	< 30	< 30	rpd	J/UJ	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
CCV 680-545588/2 (CV)/ CCV 680-545588/2	Bromomethane	142.2	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545588/2 (CV)/ CCV 680-545588/2	Naphthalene	77.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545588/2 (CV)/ CCV 680-545588/2	Acetone	78.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545781/3 (CV)/ CCV 680-545781/3	Vinyl acetate	133.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Bromomethane	149.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Dichlorodifluoromethane	73.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Chloromethane	78.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545588/30 (CV)/ CCVC 680-545588/30	Bromomethane	123.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545588/30 (CV)/ CCVC 680-545588/30	Chloroethane	70.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545781/30 (CV)/ CCVC 680-545781/30	Vinyl acetate	123.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545781/30 (CV)/ CCVC 680-545781/30	Bromomethane	78.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545948/31 (CV)/ CCVC 680-545948/31	Bromomethane	142.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545948/31 (CV)/ CCVC 680-545948/31	Dichlorodifluoromethane	72.60	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.

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 680-545588/3 (BS)/ LCS 680-545588/3	Bromomethane	149.0	53 - 141	10 - 141	percent	J/None	C	
LCS 680-545948/4 (BS)/ LCS 680-545948/4	Bromomethane	153.4	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-545588/4 (BD)/ LCSD 680-545588/4	Bromomethane	165.2	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-545948/5 (BD)/ LCSD 680-545948/5	Bromomethane	164.2	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, 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-02-08X_FAL18 (N)/ 680-159494-2	Toluene-d8	88.96	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.

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
G6M-13-06X_FAL18 (N)/ 680-159494-4		14.03	< 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 SW9060A, 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 280-435139/4 (LB)/ MB 280-435139/4	Total Organic Carbon	0.1900	< 0.16	< 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.

Qualified Results

No results associated with this sample delivery group required qualification.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-08X_FAL18	N	Methane	390	38000	38000 J	38000	
G6M-13-06X_FAL18	N	Methane	390	17000	17000 J	17000	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-08X_FAL18	N	1,1,1,2-Tetrachloroethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,1,1-Trichloroethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,1,2,2-Tetrachloroethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,1,2-Trichloroethane	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	1,1-Dichloroethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,1-Dichloroethene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,1-Dichloropropene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,2,3-Trichlorobenzene	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	1,2,3-Trichloropropane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,2,4-Trichlorobenzene	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	1,2,4-Trimethylbenzene	10.0	5.90 J D	5.90 J	5.90 J	TR
G6M-02-08X_FAL18	N	1,2-Dibromo-3-chloropropane	50.0	20.0 U	20.0 UJ	20.0 U	
G6M-02-08X_FAL18	N	1,2-Dibromoethane (EDB)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,2-Dichlorobenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,2-Dichloroethane	10.0	10.0 U M	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,2-Dichloroethene	20.0	8.00 J D	8.00 J	8.00 J	TR
G6M-02-08X_FAL18	N	1,2-Dichloropropane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,3,5-Trimethylbenzene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	1,3-Dichlorobenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,3-Dichloropropane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	1,4-Dichlorobenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	2,2-Dichloropropane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	2-Butanone (MEK)	100	77.0 J D M	77.0 J	77.0 J	TR
G6M-02-08X_FAL18	N	2-Chlorotoluene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	2-Hexanone	100	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	4-Chlorotoluene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	4-Methyl-2-pentanone (MIBK)	100	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	Acetone	100	76.0 J D	76.0 J	76.0 J	TR
G6M-02-08X_FAL18	N	Benzene	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
G6M-02-08X_FAL18	N	Bromobenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Bromochloromethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Bromodichloromethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Bromoform	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Bromomethane	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	Carbon disulfide	20.0	20.0 U	20.0 UJ	20.0 U	
G6M-02-08X_FAL18	N	Carbon tetrachloride	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	Chlorobenzene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	Chloroethane	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	Chloroform	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Chloromethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	cis-1,2-Dichloroethene	10.0	8.00 J D	8.00 J	8.00 J	TR
G6M-02-08X_FAL18	N	cis-1,3-Dichloropropene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Dibromochloromethane	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	Dibromomethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Dichlorodifluoromethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Ethylbenzene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	Hexachlorobutadiene	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	Isopropylbenzene (Cumene)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	m,p-Xylene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Methyl tert-butyl ether (MTBE)	100	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	Methylene chloride	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	Naphthalene	50.0	50.0 U	50.0 UJ	50.0 U	
G6M-02-08X_FAL18	N	n-Butylbenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	n-Propylbenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	o-Xylene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	p-Cymene (p-Isopropyltoluene)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	sec-Butylbenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Styrene	10.0	5.00 U	5.00 UJ	5.00 U	
G6M-02-08X_FAL18	N	tert-Butylbenzene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Tetrachloroethene (PCE)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Toluene	10.0	1400 D	1400 J	1400	
G6M-02-08X_FAL18	N	trans-1,2-Dichloroethene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	trans-1,3-Dichloropropene	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Trichloroethene (TCE)	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Trichlorofluoromethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Vinyl acetate	20.0	20.0 U Q	20.0 UJ	20.0 U	
G6M-02-08X_FAL18	N	Vinyl chloride	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-02-08X_FAL18	N	Xylenes, Total	20.0	5.00 U	5.00 UJ	5.00 U	
G6M-04-09X_FAL18	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-09X_FAL18	N	Chloroethane	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-04-09X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-13X_FAL18	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-13X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-13X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-15X_FAL18	N	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-15X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-15X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	1,2,4-Trimethylbenzene	1.00	0.560 J	0.560 J	0.560 J	TR
G6M-13-06X_FAL18	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-06X_FAL18	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2-Dichloroethene	2.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	2-Butanone (MEK)	10.0	400	400 J	400	
G6M-13-06X_FAL18	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	2-Hexanone	10.0	2.60 J	2.60 J	2.60 J	TR
G6M-13-06X_FAL18	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U M	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	Acetone	10.0	79.0	79.0 J	79.0	
G6M-13-06X_FAL18	N	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	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
G6M-13-06X_FAL18	N	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-06X_FAL18	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	cis-1,2-Dichloroethene	1.00	0.670 J	0.670 J	0.670 J	TR
G6M-13-06X_FAL18	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Ethylbenzene	1.00	7.30	7.30 J	7.30	
G6M-13-06X_FAL18	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	m,p-Xylene	1.00	0.350 J	0.350 J	0.350 J	TR
G6M-13-06X_FAL18	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-06X_FAL18	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	n-Propylbenzene	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
G6M-13-06X_FAL18	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Toluene	1.00	4.70	4.70 J	4.70	
G6M-13-06X_FAL18	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-06X_FAL18	N	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-13-06X_FAL18	N	Vinyl chloride	1.00	1.20	1.20 J	1.20	
G6M-13-06X_FAL18	N	Xylenes, Total	2.00	0.350 J	0.350 J	0.350 J	TR
G6M-EB01_FAL18	EB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-EB01_FAL18	EB	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-EB01_FAL18	EB	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-TB03_FAL18	TB	Acetone	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-TB03_FAL18	TB	Chloroethane	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-TB03_FAL18	TB	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).
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
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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?		•		

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?		•		
Were target analytes reported in the field blank(s) less than MDL?			•	
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?		•		Results for methane required dilution.
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?		•		

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?		•		
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?		•		

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?	•			
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?		•		

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?	•			See outlier report; spl -4 was analyzed within 14 days; qualification applied by ADR was removed.
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?		•		see outlier report
Were surrogate recoveries within project acceptance limits?		•		see outlier report
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?		•		see outlier report
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?		•		Some voc results required dilutions.
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?		•		

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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

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?		•		
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?		•		

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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?		•		TOC results required dilutions
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

Data Validation Report for 6801598771

Facility:	Long Term Monitoring
Event:	KOMAN, Long Term Monitoring, AOC 50 Fall 2018
SDG:	6801598771
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Savannah, GA
Data Review Contractor:	KOMAN Government Solutions
Data Review Level:	2B
Primary Data Reviewer:	Sherri Pullar, Data Validation Chemist
Second Reviewer: :	Laurie Ekes, Senior Scientist

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9060A
G6M-02-03X_FAL18	680-159877-2	Water	Field Sample/N	X	X	X	X	X
G6M-02-04X_FAL18	680-159877-4	Water	Field Sample/N	X	X	X	X	X
G6M-04-04X_FAL18	680-159877-5	Water	Field Sample/N		X	X	X	
G6M-04-14X_FAL18	680-159877-1	Water	Field Sample/N		X	X	X	
G6M-97-28X_FAL18	680-159877-3	Water	Field Sample/N	X	X	X	X	X
G6M-EB03	680-159877-6	Water	Equipment Blank/EB		X	X	X	
G6M-TB05	680-159877-7	Water	Trip Blank/TB				X	

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Arvada, CO and were reported under sample delivery group (SDG) 6801598771. 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
- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- 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 3 results (0.59%) out of the 506 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG includes 5 samples, 1 equipment blank and 1 trip blank

Analytical Method	Data Reviewer Comment
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.
SW9060A	No additional comments; see Checklist for detail.

Sherri A Pullar

December 17, 2018

Reviewed by Sherri Pullar, Data Validation Chemist, KOMAN Government Solutions

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.

Laurie Ekes

December 29, 2018

Reviewed by Laurie Ekes, Senior Scientist, KOMAN Government Solutions

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method RSK175, 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 680-546157/19 (CV)/ CCV 680-546157/19	Ethene	0.000	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-546157/19 (CV)/ CCV 680-546157/19	Ethane	0.000	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD 680-546157/4 (BD)/ LCSD 680-546157/4	Methane	173.3	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-546157/7 (BD)/ LCSD 680-546157/7	Methane	169.5	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-546737/36 (BD)/ LCSD 680-546737/36	Methane	165.3	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-546737/53 (BD)/ LCSD 680-546737/53	Methane	172.3	< 30	< 30	rpd	J/UJ	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-04X_FAL18 (SD)/ 680-159877-5	Manganese	-160.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-04X_FAL18 (SD)/ 680-159877-5	Iron	-20.00	87 - 115	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-04X_FAL18 (MS)/ 680-159877-5	Manganese	0.000	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-04-04X_FAL18 (MS)/ 680-159877-5	Iron	60.00	87 - 115	10 - 125	percent	J/UJ	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6020A, Dissolved, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-04-04X_FAL18 (MS)/ 680-159877-5	Arsenic	118.0	84 - 116	10 - 125	percent	J/None	M	Spike amount Insignificant
G6M-04-04X_FAL18 (SD)/ 680-159877-5	Arsenic	80.00	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
CCV 680-546363/3 (CV)/ CCV 680-546363/3	Bromomethane	73.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-546498/32 (CV)/ CCVC 680-546498/32	2,2-Dichloropropane	68.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-546498/32 (CV)/ CCVC 680-546498/32	Bromomethane	75.80	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW9060A, 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 280-435842/35 (LB)/ MB 280-435842/35	Total Organic Carbon	0.3480	< 0.16	< 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 Blank for SW9060A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-03X_FAL18	N	Total Organic Carbon	1.30	1.30	1.30 U	+	mg/l	L
G6M-02-04X_FAL18	N	Total Organic Carbon	1.50	1.50	1.50 U	+	mg/l	L
G6M-97-28X_FAL18	N	Total Organic Carbon	1.20	1.20	1.20 U	+	mg/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: SW9060A	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-03X_FAL18	N	Total Organic Carbon	1.30	1.30	1.30 U	+	mg/l	L
G6M-02-04X_FAL18	N	Total Organic Carbon	1.50	1.50	1.50 U	+	mg/l	L
G6M-97-28X_FAL18	N	Total Organic Carbon	1.20	1.20	1.20 U	+	mg/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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-02-03X_FAL18	N	Ethane	1.10	1.10 U	1.10 UJ	1.10 U	
G6M-02-03X_FAL18	N	Ethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-03X_FAL18	N	Methane	390	430	430 J	430	
G6M-02-04X_FAL18	N	Methane	390	6500	6500 J	6500	
G6M-97-28X_FAL18	N	Methane	0.580	210	210 J	210	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
G6M-02-03X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-03X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-04X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-04X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-04X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-04X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-14X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-14X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-97-28X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-97-28X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-EB03	EB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-EB03	EB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-TB05	TB	Bromomethane	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).
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
M	MS Recovery
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: 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?		•		See outlier report for ethane and ethene.
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?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			Results for methane were qualified due to RPD; these qualifications were removed because the RPDs were within the QC limit. See outlier report.
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?		•		Methane results required dilution.
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?		•		

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?	•			
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?	•			Spl-5 was prepared and analyzed for MS/MSD
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?		•		

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?	•			
Was a MS/MSD pair prepared with each batch?	•			Spl-5 was prepared and analyzed for MS/MSD
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?		•		

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?	•			See outlier report; ADR qualified the data; however the CCVs were within the QC limits. Qualifiers were removed.
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?	•			
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 DoD QSM corrective actions followed if deviations were noted?	•			
Were any data rejected during the verification process?		•		

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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

Data Validation Report for 6801600181

Facility:	Long Term Monitoring
Event:	KOMAN, Long Term Monitoring, AOC 50 Fall 2018
SDG:	6801600181
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Arvada, CO
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2B
Primary Data Reviewer:	Sherri Pullar, Data Validation Chemist
Second Reviewer:	Laurie Ekes, Senior Scientist
Date Submitted:	January 08, 2019

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP02_Fal18	680-160018-15	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
AOC50-DUP05_Fal18	680-160018-10	Water	Field Duplicate/FD	X	X	X	X	X	X	X	X	X
G6M-02-01X_Fal18	680-160018-1	Water	Field Sample/N				X	X	X			
G6M-03-07X_Fal18	680-160018-3	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-03-08X_Fal18	680-160018-18	Water	Field Sample/N				X	X	X			
G6M-04-01X_Fal18	680-160018-5	Water	Field Sample/N				X	X	X			
G6M-04-02X_Fal18	680-160018-14	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-04-03X_Fal18	680-160018-6	Water	Field Sample/N				X	X	X			
G6M-13-01X_Fal18	680-160018-8	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-13-03X_Fal18	680-160018-16	Water	Field Sample/N						X			
G6M-13-04X_Fal18	680-160018-7	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-97-05B_Fal18	680-160018-13	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-EB04_Fal18	680-160018-11	Water	Equipment Blank/EB				X	X	X			
G6M-EB05_Fal18	680-160018-19	Water	Equipment Blank/EB				X	X	X			
G6M-TB06_Fal18	680-160018-12	Water	Trip Blank/TB						X			
MW-3_Fal18	680-160018-2	Water	Field Sample/N				X	X	X			
MW-7_Fal18	680-160018-9	Water	Field Sample/N				X	X	X			
XSA-12-96X_Fal18	680-160018-17	Water	Field Sample/N				X	X	X			
XSA-12-97X_Fal18	680-160018-4	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Arvada, CO and were reported under sample delivery group (SDG) 6801600181. 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
- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- Lab Replicate RPD
- 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 (1.57%) out of the 1399 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG contains 14 samples, 2 FD samples, 2 EBs, and 1 TB for AOC 50 Fall 2018 LTM

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.

Sherri Pullar

January 04, 2019

Reviewed by Sherri Pullar, Data Validation Chemist, KOMAN Government Solutions, LLC

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.



January 11, 2019

Reviewed by Laurie Ekes, Senior Scientist, KOMAN Government Solutions, LLC

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
CCB 280-437011/17 (CB)/ CCB 280-437011/17	Alkalinity, Total (as CaCO3)	5.090	< 1.1	< 5	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 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
LCSD 680-547139/10 (BD)/ LCSD 680-547139/10	Methane	173.0	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-547139/7 (BD)/ LCSD 680-547139/7	Methane	172.1	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-547315/39 (BD)/ LCSD 680-547315/39	Methane	171.7	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-547315/41 (BD)/ LCSD 680-547315/41	Methane	171.3	< 30	< 30	rpd	J/UJ	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS RPD for RSK175

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02_Fal18	FD	Methane	390	11000	11000 J		ug/l	Z
G6M-04-02X_Fal18	N	Methane	390	14000	14000 J		ug/l	Z
G6M-97-05B_Fal18	N	Methane	390	530	530 J		ug/l	Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method RSK175, 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-DUP05_FAL18 (FD)/ 680-160018-10		14.12	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
AOC50-DUP05_FAL18 (FD)/ 680-160018-10		14.12	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-03-07X_FAL18 (N)/ 680-160018-3		14.07	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-03-07X_FAL18 (N)/ 680-160018-3		14.07	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-13-01X_FAL18 (N)/ 680-160018-8		14.11	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-13-01X_FAL18 (N)/ 680-160018-8		14.11	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-13-04X_FAL18 (N)/ 680-160018-7		14.21	< 14	< 28	days	J/UJ	H1	Test Exceeds UWL
G6M-13-04X_FAL18 (N)/ 680-160018-7		14.21	< 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 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
G6M-EB04_FAL18 (EB)/ 680-160018-11	Iron	21.00	< 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.

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-03-08X_FAL18 (SD)/ 680-160018-18	Manganese	-170.0	90 - 114	10 - 125	percent	J/X	M	Spike amount Insignificant
G6M-03-08X_FAL18 (MS)/ 680-160018-18	Manganese	60.00	90 - 114	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
CCV 680-547061/3 (CV)/ CCV 680-547061/3	Dichlorodifluoromethane	122.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-547061/3 (CV)/ CCV 680-547061/3	Bromomethane	124.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-547061/3 (CV)/ CCV 680-547061/3	Bromoform	76.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-547151/3 (CV)/ CCV 680-547151/3	Trichlorofluoromethane	120.2	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-547151/3 (CV)/ CCV 680-547151/3	Bromomethane	121.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-547151/3 (CV)/ CCV 680-547151/3	Dichlorodifluoromethane	126.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-547304/3 (CV)/ CCV 680-547304/3	Bromoform	77.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-547061/31 (CV)/ CCVC 680-547061/31	Dichlorodifluoromethane	121.4	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-547061/31 (CV)/ CCVC 680-547061/31	Bromomethane	125.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-547151/31 (CV)/ CCVC 680-547151/31	Hexachlorobutadiene	79.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-547304/31 (CV)/ CCVC 680-547304/31	Bromomethane	121.8	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-DUP02_Fal18	FD	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-02-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-07X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-08X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-04-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-04-02X_Fal18	N	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-04-03X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-03X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-04X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-97-05B_Fal18	N	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-EB04_Fal18	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-EB05_Fal18	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-TB06_Fal18	TB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
MW-3_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
MW-7_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2

Qualified Results associated with the Continuing Calibration Verification for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
XSA-12-96X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
XSA-12-97X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
G6M-EB05_FAL18 (EB)/ 680-160018-19	Acetone	8.400	< 7	< 10	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, MS RPD

The objective of matrix spikes/matrix spike duplicates (MS/MSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. MS/MSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Matrix spikes/matrix spike duplicates results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-03-08X_FAL18 (SD)/ 680-160018-18	Bromomethane	21.20	< 20	< 20	rpd	J/None	D	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method 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-DUP05_FAL18 (FD)/ 680-160018-10		14.31	< 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 SW9060A, 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 280-436636/35 (LB)/ MB 280-436636/35	Total Organic Carbon	0.2750	< 0.16	< 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 Blank for SW9060A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-97-05B_Fal18	N	Total Organic Carbon	1.00	0.580 J	1.00 U		mg/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: RSK175	Extraction Method: METHOD							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02_Fal18	FD	Methane	390	11000	11000 J		ug/l	Z
G6M-04-02X_Fal18	N	Methane	390	14000	14000 J		ug/l	Z
G6M-97-05B_Fal18	N	Methane	390	530	530 J		ug/l	Z

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP02_Fal18	FD	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-02-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-07X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-03-08X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-04-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-04-02X_Fal18	N	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-04-03X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-01X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-03X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-13-04X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-97-05B_Fal18	N	Bromoform	2.00	2.00 U	2.00 UJ		ug/l	V2
G6M-EB04_Fal18	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-EB05_Fal18	EB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
G6M-TB06_Fal18	TB	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
MW-3_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
MW-7_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
XSA-12-96X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2
XSA-12-97X_Fal18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	V2

Test Method: SW9060A	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-97-05B_Fal18	N	Total Organic Carbon	1.00	0.580 J	1.00 U		mg/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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-DUP05_Fal18	FD	Ethane	1.10	1.10 U	1.10 UJ	1.10 U	
AOC50-DUP05_Fal18	FD	Ethene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Methane	390	2300	2300 J	2300	
G6M-03-07X_Fal18	N	Ethane	1.10	2.80	2.80 J	2.80	
G6M-03-07X_Fal18	N	Ethene	1.00	19.0	19.0 J	19.0	
G6M-03-07X_Fal18	N	Methane	390	37000	37000 J	37000	
G6M-13-01X_Fal18	N	Ethane	1.10	1.10 U	1.10 UJ	1.10 U	
G6M-13-01X_Fal18	N	Ethene	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-13-01X_Fal18	N	Methane	390	2300	2300 J	2300	
G6M-13-04X_Fal18	N	Ethane	1.10	1.80	1.80 J	1.80	
G6M-13-04X_Fal18	N	Ethene	1.00	4.40	4.40 J	4.40	
G6M-13-04X_Fal18	N	Methane	390	2700	2700 J	2700	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP05_Fal18	FD	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ	2.00 U	
AOC50-DUP05_Fal18	FD	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,2-Dichloroethene	2.00	3.50	3.50 J	3.50	
AOC50-DUP05_Fal18	FD	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ	10.0 U	
AOC50-DUP05_Fal18	FD	2-Chlorotoluene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	2-Hexanone	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	4-Chlorotoluene	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-DUP05_Fal18	FD	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	Acetone	10.0	10.0 U M	10.0 UJ	10.0 U	
AOC50-DUP05_Fal18	FD	Benzene	1.00	1.00 U M	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Bromobenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Bromochloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Bromodichloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Bromoform	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	Carbon disulfide	2.00	2.00 U	2.00 UJ	2.00 U	
AOC50-DUP05_Fal18	FD	Carbon tetrachloride	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	Chlorobenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	Chloroform	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	cis-1,2-Dichloroethene	1.00	3.50	3.50 J	3.50	
AOC50-DUP05_Fal18	FD	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Dibromochloromethane	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	Dibromomethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Ethylbenzene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	m,p-Xylene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	Methylene chloride	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	Naphthalene	5.00	5.00 U	5.00 UJ	5.00 U	
AOC50-DUP05_Fal18	FD	n-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	n-Propylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	o-Xylene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	sec-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Styrene	1.00	0.500 U	0.500 UJ	0.500 U	
AOC50-DUP05_Fal18	FD	tert-Butylbenzene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Tetrachloroethene (PCE)	1.00	0.840 J	0.840 J	0.840	
AOC50-DUP05_Fal18	FD	Toluene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Trichloroethene (TCE)	1.00	1.40	1.40 J	1.40	

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-DUP05_Fal18	FD	Trichlorofluoromethane	1.00	1.00 U Q	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	Vinyl acetate	2.00	2.00 U	2.00 UJ	2.00 U	
AOC50-DUP05_Fal18	FD	Vinyl chloride	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP05_Fal18	FD	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).
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
D	MS RPD
H1	Test Hold Time
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank
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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?		•		

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?	•			Spls were analyzed within 14 days; qualifications were removed (see outlier report)
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?		•		
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?	•			Field duplicate pair spls -14/-15
Were QAPP specified laboratory LOQs/RLs achieved?		•		see outlier report
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?		•		

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?	•			spls -11/-19 were EB
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			Only LCS
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?	•			Spl-18 was prepared and analyzed as MS/MSD
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?		•		

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?	•			Spls-11/-19
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-18 was prepared and analyzed as MS/MSD
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?		•		

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?	•			Samples were run within 14 days; qualifications for HT were removed from spl-10
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?		•		See outlier report
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?	•			Spls-11 and 19 were EB and spl-12 was TB
Were target analytes reported in the field blank(s) less than MDL?		•		See outlier report
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?	•			Spl-18 was prepared and analyzed for MS/MSD
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?		•		See outlier report
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			Field duplicate pair spls -14/-15
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?		•		

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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were any data rejected during the verification process?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-8 was prepared and analyzed as MS/MSD
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?		•		

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?		•		see outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			Only LCS
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?	•			Spl-3 was prepared and analyzed as MS/MSD
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?		•		

Data Validation Report for 6801597351

Facility:	Long Term Monitoring
Event:	KOMAN, Long Term Monitoring, AOC 50 Fall 2018
SDG:	6801597351
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Arvada, CO
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2B
Primary Data Reviewer:	Sherri Pullar, Data Validation Chemist
Second Reviewer:	Laurie Ekes, Senior Scientist
Date Submitted:	January 08, 2019

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	A2320B	E353.2	RSK175	SW6010C - Dissolved	SW6020A - Dissolved	SW8260B	SW9034	SW9056A	SW9060A
AOC50-DUP01_FAL18	680-159735-7	Water	Field Duplicate/FD				X	X	X			
G6M_TB04	680-159735-6	Water	Trip Blank/TB						X			
G6M-02-06X_FAL18	680-159735-19	Water	Field Sample/N				X	X	X			
G6M-02-07X_FAL18	680-159735-17	Water	Field Sample/N				X	X	X			
G6M-02-11X_FAL18	680-159735-15	Water	Field Sample/N				X	X	X			
G6M-02-12X_FAL18	680-159735-13	Water	Field Sample/N				X	X	X			
G6M-02-13X_FAL18	680-159735-20	Water	Field Sample/N			X	X	X	X			
G6M-03-10X_FAL18	680-159735-11	Water	Field Sample/N				X	X	X			
G6M-04-05X_FAL18	680-159735-12	Water	Field Sample/N						X			
G6M-04-06X_FAL18	680-159735-9	Water	Field Sample/N				X	X	X			
G6M-04-07X_FAL18	680-159735-8	Water	Field Sample/N				X	X	X			
G6M-04-11X_FAL18	680-159735-16	Water	Field Sample/N				X	X	X			
G6M-04-22X_FAL18	680-159735-4	Water	Field Sample/N				X	X	X			
G6M-04-31X_FAL18	680-159735-5	Water	Field Sample/N				X	X	X			
G6M-13-02X_FAL18	680-159735-1	Water	Field Sample/N	X	X	X	X	X	X	X	X	X
G6M-EB02_FAL18	680-159735-14	Water	Equipment Blank/EB				X	X	X			
XSA-12-95X_FAL18	680-159735-10	Water	Field Sample/N				X	X	X			
XSA-12-98X_FAL18	680-159735-18	Water	Field Sample/N				X	X	X			

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Arvada, CO and were reported under sample delivery group (SDG) 6801597351. 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
- Blank - Negative
- Calibration Blank
- Calibration Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Duplicate RPD
- Interference Check Sample A
- Interference Check Sample A - Negative
- Interference Check Sample AB
- 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 154 results (12.00%) out of the 1283 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG contains 15 field samples, 1 FD, 1 EB, and 1 TB for AOC 50 Fall 2018 LTM.

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.

Sherri A Pullar

January 07, 2019

Reviewed by Sherri Pullar, Data Validation Chemist, KOMAN Government Solutions, LLC

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.

January 10, 2019

Reviewed by Laurie Ekes, Senior Scientist, KOMAN Government Solutions, LLC

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method RSK175, 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 680-546157/19 (CV)/ CCV 680-546157/19	Ethene	0.000	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-546157/19 (CV)/ CCV 680-546157/19	Ethane	0.000	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.

No results associated with this QC element required qualification.

Quality Control Outliers for test method RSK175, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
LCSD 680-546157/4 (BD)/ LCSD 680-546157/4	Methane	173.3	< 30	< 30	rpd	J/UJ	Z	
LCSD 680-546157/7 (BD)/ LCSD 680-546157/7	Methane	169.5	< 30	< 30	rpd	J/UJ	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW6010C, Dissolved, Calibration Blank

The purpose of calibration blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in calibration blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
CCB 680-545846/85 (CB)/ CCB 680-545846/85	Manganese	1.060	< 1	< 10	ug/l	U/None	B2	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Calibration Blank for SW6010C, Dissolved

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-02-07X_FAL18	N	Manganese	10.0	9.40 J	10.0 U		ug/l	B2
G6M-04-11X_FAL18	N	Manganese	10.0	1.30 J	10.0 U		ug/l	B2
XSA-12-98X_FAL18	N	Manganese	10.0	6.20 J	10.0 U		ug/l	B2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
G6M-EB02_FAL18 (EB)/ 680-159735-14	Iron	43.00	< 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-02-06X_FAL18	N	Iron	50.0	49.0 J	50.0 U		ug/l	V
XSA-12-98X_FAL18	N	Iron	50.0	44.0 J	50.0 U		ug/l	V

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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 680-545776/3 (CV)/ CCV 680-545776/3	Bromomethane	69.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545776/3 (CV)/ CCV 680-545776/3	Chloroethane	77.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545781/3 (CV)/ CCV 680-545781/3	Vinyl acetate	133.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Bromomethane	149.4	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Dichlorodifluoromethane	73.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545948/3 (CV)/ CCV 680-545948/3	Chloromethane	78.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-545954/3 (CV)/ CCV 680-545954/3	Vinyl acetate	138.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545954/3 (CV)/ CCV 680-545954/3	Bromomethane	79.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545776/31 (CV)/ CCVC 680-545776/31	Bromomethane	75.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545781/30 (CV)/ CCVC 680-545781/30	Vinyl acetate	123.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545781/30 (CV)/ CCVC 680-545781/30	Bromomethane	78.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545917/32 (CV)/ CCVC 680-545917/32	2,2-Dichloropropane	71.00	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545917/32 (CV)/ CCVC 680-545917/32	Bromomethane	73.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545948/31 (CV)/ CCVC 680-545948/31	Bromomethane	142.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-545948/31 (CV)/ CCVC 680-545948/31	Dichlorodifluoromethane	72.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545954/30 (CV)/ CCVC 680-545954/30	Vinyl acetate	132.0	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-02-12X_FAL18	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-05X_FAL18	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-EB02_FAL18	EB	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).
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-04-31X_FAL18 (N)/ 680-159735-7	Benzene	1.500	< 1	< 1	ug/l	J/	D3	
G6M-04-31X_FAL18 (N)/ 680-159735-7	Acetone	11.00	< 10	< 10	ug/l	J/	D3	
G6M-04-31X_FAL18 (N)/ 680-159735-7	Isopropylbenzene (Cumene)	110.0	< 1	< 1	ug/l	J/	D3	
G6M-04-31X_FAL18 (N)/ 680-159735-7	p-Cymene (p-Isopropyltoluene)	2.200	< 1	< 1	ug/l	J/	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01_FAL18	FD	Acetone	10.0	11.0	11.0 J		ug/l	D3
AOC50-DUP01_FAL18	FD	Benzene	1.00	1.50	1.50 J		ug/l	D3
AOC50-DUP01_FAL18	FD	Isopropylbenzene (Cumene)	1.00	110	110 J		ug/l	D3
AOC50-DUP01_FAL18	FD	p-Cymene (p-Isopropyltoluene)	1.00	2.20	2.20 J		ug/l	D3
G6M-04-31X_FAL18	N	Acetone	10.0	10.0 U	10.0		ug/l	D3
G6M-04-31X_FAL18	N	Benzene	1.00	1.00 U	1.00		ug/l	D3
G6M-04-31X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00		ug/l	D3
G6M-04-31X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
LCS 680-545948/4 (BS)/ LCS 680-545948/4	Bromomethane	153.4	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-545948/5 (BD)/ LCSD 680-545948/5	Bromomethane	164.2	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, 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-04-22X_FAL18 (N)/ 680-159735-4	1,2-Dichloroethane-d4	80.79	81 - 118	10 - 118	percent	J/UJ	I	
G6M-13-02X_FAL18 (N)/ 680-159735-1	1,2-Dichloroethane-d4	80.05	81 - 118	10 - 118	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-04-22X_FAL18	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloroethene	2.00	2.80	2.80 J	-	ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Acetone	10.0	14.0	14.0 J	-	ug/l	I

Qualified Results associated with the Surrogate for SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-04-22X_FAL18	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	cis-1,2-Dichloroethene	1.00	2.80	2.80 J	-	ug/l	I
G6M-04-22X_FAL18	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Ethylbenzene	1.00	0.580 J	0.580 J	-	ug/l	I/TR
G6M-04-22X_FAL18	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Toluene	1.00	57.0	57.0 J	-	ug/l	I
G6M-04-22X_FAL18	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Vinyl acetate	2.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Vinyl chloride	1.00	3.40	3.40 J	-	ug/l	I
G6M-04-22X_FAL18	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,1,2-Tetrachloroethane	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_FAL18	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloroethene	2.00	25.0	25.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Acetone	10.0	86.0	86.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	cis-1,2-Dichloroethene	1.00	24.0	24.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	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_FAL18	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Tetrachloroethene (PCE)	1.00	28.0	28.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	trans-1,2-Dichloroethene	1.00	1.00 M	1.00 J	-	ug/l	I
G6M-13-02X_FAL18	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Trichloroethene (TCE)	1.00	9.60	9.60 J	-	ug/l	I
G6M-13-02X_FAL18	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Vinyl acetate	2.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Vinyl chloride	1.00	3.50	3.50 J	-	ug/l	I
G6M-13-02X_FAL18	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).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9056A, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
G6M-13-02X_FAL18 (MS)/ 680-159735-1	Sulfate	75.00	90 - 110	10 - 110	percent	J/UJ	M	
G6M-13-02X_FAL18 (SD)/ 680-159735-1	Sulfate	83.00	90 - 110	10 - 110	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW9056A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X_FAL18	N	Sulfate	1.00	10.0 J1	10.0 J	-	mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW9060A, 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 280-435842/4 (LB)/ MB 280-435842/4	Total Organic Carbon	0.2470	< 0.16	< 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.

Quality Control Outliers for test method SW9060A, 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-13-02X_FAL18 (MS)/ 680-159735-1	Total Organic Carbon	84.80	88 - 112	10 - 112	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW9060A

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X_FAL18	N	Total Organic Carbon	1.00	29.0 J1	29.0 J	-	mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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-02-06X_FAL18	N	Iron	50.0	49.0 J	50.0 U		ug/l	V
G6M-02-07X_FAL18	N	Manganese	10.0	9.40 J	10.0 U		ug/l	B2
G6M-04-11X_FAL18	N	Manganese	10.0	1.30 J	10.0 U		ug/l	B2
XSA-12-98X_FAL18	N	Iron	50.0	44.0 J	50.0 U		ug/l	V
XSA-12-98X_FAL18	N	Manganese	10.0	6.20 J	10.0 U		ug/l	B2

Test Method: SW8260B	Extraction Method: SW5030B							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AOC50-DUP01_FAL18	FD	Acetone	10.0	11.0	11.0 J		ug/l	D3
AOC50-DUP01_FAL18	FD	Benzene	1.00	1.50	1.50 J		ug/l	D3
AOC50-DUP01_FAL18	FD	Isopropylbenzene (Cumene)	1.00	110	110 J		ug/l	D3
AOC50-DUP01_FAL18	FD	p-Cymene (p-Isopropyltoluene)	1.00	2.20	2.20 J		ug/l	D3
G6M-02-12X_FAL18	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-05X_FAL18	N	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2
G6M-04-22X_FAL18	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloroethene	2.00	2.80	2.80 J	-	ug/l	I
G6M-04-22X_FAL18	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	4-Chlorotoluene	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-04-22X_FAL18	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Acetone	10.0	14.0	14.0 J	-	ug/l	I
G6M-04-22X_FAL18	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	cis-1,2-Dichloroethene	1.00	2.80	2.80 J	-	ug/l	I
G6M-04-22X_FAL18	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Ethylbenzene	1.00	0.580 J	0.580 J	-	ug/l	I/TR
G6M-04-22X_FAL18	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-22X_FAL18	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Tetrachloroethene (PCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Toluene	1.00	57.0	57.0 J	-	ug/l	I
G6M-04-22X_FAL18	N	trans-1,2-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Trichloroethene (TCE)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-04-22X_FAL18	N	Vinyl acetate	2.00	2.00 U Q	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-04-22X_FAL18	N	Vinyl chloride	1.00	3.40	3.40 J	-	ug/l	I
G6M-04-22X_FAL18	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-04-31X_FAL18	N	Acetone	10.0	10.0 U	10.0		ug/l	D3
G6M-04-31X_FAL18	N	Benzene	1.00	1.00 U	1.00		ug/l	D3
G6M-04-31X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00		ug/l	D3
G6M-04-31X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00		ug/l	D3
G6M-13-02X_FAL18	N	1,1,1,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,1-Trichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,2,2-Tetrachloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1,2-Trichloroethane	1.00	0.500 U M	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloroethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloroethene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,1-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,3-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,3-Trichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,4-Trichlorobenzene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2,4-Trimethylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dibromo-3-chloropropane	5.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dibromoethane (EDB)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloroethane	1.00	1.00 U M	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloroethene	2.00	25.0	25.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	1,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3,5-Trimethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,3-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	1,4-Dichlorobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Butanone (MEK)	10.0	10.0 U	10.0 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Chlorotoluene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	2-Hexanone	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	4-Chlorotoluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	4-Methyl-2-pentanone (MIBK)	10.0	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Acetone	10.0	86.0	86.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	Benzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromobenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromochloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromodichloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Bromoform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	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-13-02X_FAL18	N	Carbon disulfide	2.00	2.00 U	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Carbon tetrachloride	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloroform	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	cis-1,2-Dichloroethene	1.00	24.0	24.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	cis-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Dibromochloromethane	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Dibromomethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Ethylbenzene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Hexachlorobutadiene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Isopropylbenzene (Cumene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	m,p-Xylene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Methyl tert-butyl ether (MTBE)	10.0	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	Methylene chloride	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Naphthalene	5.00	5.00 U	5.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	n-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	n-Propylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	o-Xylene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	p-Cymene (p-Isopropyltoluene)	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	sec-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Styrene	1.00	0.500 U	0.500 UJ		ug/l	I
G6M-13-02X_FAL18	N	tert-Butylbenzene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Tetrachloroethene (PCE)	1.00	28.0	28.0 J	-	ug/l	I
G6M-13-02X_FAL18	N	Toluene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	trans-1,2-Dichloroethene	1.00	1.00 M	1.00 J	-	ug/l	I
G6M-13-02X_FAL18	N	trans-1,3-Dichloropropene	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Trichloroethene (TCE)	1.00	9.60	9.60 J	-	ug/l	I
G6M-13-02X_FAL18	N	Trichlorofluoromethane	1.00	1.00 U	1.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Vinyl acetate	2.00	2.00 U Q	2.00 UJ		ug/l	I
G6M-13-02X_FAL18	N	Vinyl chloride	1.00	3.50	3.50 J	-	ug/l	I
G6M-13-02X_FAL18	N	Xylenes, Total	2.00	0.500 U	0.500 UJ		ug/l	I
G6M-EB02_FAL18	EB	Bromomethane	5.00	5.00 U Q	5.00 UJ		ug/l	V2

Test Method: SW9056A	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X_FAL18	N	Sulfate	1.00	10.0 J1	10.0 J	-	mg/l	M

Table of All Qualified Results

Test Method: SW9060A	Extraction Method: NONE							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
G6M-13-02X_FAL18	N	Total Organic Carbon	1.00	29.0 J1	29.0 J	-	mg/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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-02-13X_FAL18	N	Ethane	1.10	1.80	1.80 J	1.80	
G6M-02-13X_FAL18	N	Ethene	1.00	2.80	2.80 J	2.80	
G6M-02-13X_FAL18	N	Methane	390	5900	5900 J	5900	
G6M-13-02X_FAL18	N	Ethane	1.10	1.60	1.60 J	1.60	
G6M-13-02X_FAL18	N	Ethene	1.00	1.30	1.30 J	1.30	
G6M-13-02X_FAL18	N	Methane	390	6700	6700 J	6700	

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-DUP01_FAL18	FD	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
AOC50-DUP01_FAL18	FD	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M_TB04	TB	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M_TB04	TB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-06X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-06X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-07X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-07X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-11X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-11X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-02-12X_FAL18	N	Chloroethane	5.00	5.00 U M	5.00 UJ	5.00 U	
G6M-02-13X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-02-13X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-03-10X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-05X_FAL18	N	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-06X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-06X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ	1.00 U	
G6M-04-07X_FAL18	N	2,2-Dichloropropane	2.00	2.00 U	2.00 UJ	2.00 U	
G6M-04-07X_FAL18	N	Bromomethane	10.0	10.0 U	10.0 UJ	10.0 U	
G6M-04-11X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-11X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-04-22X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 UJ	I
G6M-04-31X_FAL18	N	2,2-Dichloropropane	1.00	1.00 U	1.00 UJ	1.00 U	
G6M-04-31X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-13-02X_FAL18	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 UJ	I
G6M-EB02_FAL18	EB	Chloroethane	5.00	5.00 U	5.00 UJ	5.00 U	
XSA-12-95X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-95X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X_FAL18	N	Chloromethane	1.00	1.00 U	1.00 UJ	1.00 U	
XSA-12-98X_FAL18	N	Dichlorodifluoromethane	1.00	1.00 U M	1.00 UJ	1.00 U	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
D3	Field Duplicate RPD
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
TR	Trace Level Detect
V	Equipment Blank
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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-1 was prepared and analyzed as MS/MSD
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?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-1 was prepared and analyzed as MS/MSD
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?		•		

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?	•			see outlier report; CCV qualifications removed
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?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			See outlier report; LCS RPD qualifiers removed
Was a MS/MSD pair prepared with each batch?	•			Spl-1 was prepared and analyzed as MS/MSD
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?		•		See outlier report; Methane required 39.0x dilution for two samples
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?		•		

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?		•		See outlier report.
Were field blanks (EBs or FBs) submitted with these samples?	•			Spl -14 was EB
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?	•			Spl-1 was prepared and analyzed as MS/MSD
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?	•			Spls -5/-7 were the FD pair; see FD report.
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?		•		

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?	•			Spl -14 was EB
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?	•			Spl-1 was prepared and analyzed as MS/MSD.
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?	•			Spls -5/-7 were the FD pair; see FD report.
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?		•		

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?		•		See outlier report
Were surrogate recoveries within project acceptance limits?		•		See outlier report
Was a method blank prepared and analyzed with each batch?	•			
Were field blanks (EBs or FBs) submitted with these samples?	•			Spl -14 was EB and Spl -6 was TB.
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?		•		See outlier report
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			Spl-1 was prepared and analyzed as MS/MSD
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?		•		Spls -5/-7 were the FD pair. See outlier report and FD report. Several VOCs were detected in the FD sample but not in the native sample. It is possible that the FD sample VOA vial was contaminated.
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?		•		

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 field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			Spl-1 was prepared and analyzed as MS/MSD
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?		•		

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?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-1 was prepared and analyzed as MS/MSD
Were MS/MSD recoveries within project acceptance limits?		•		See outlier report
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?		•		

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?		•		See outlier report
Were field blanks (EBs or FBs) submitted with these samples?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
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?	•			Spl-1 was prepared and analyzed as MS/MSD
Were MS/MSD recoveries within project acceptance limits?		•		See outlier report
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?		•		

Field Duplicate Report By SDG
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801597351

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Iron (FLDFLT)	60000	59000	50.0	1.68	30	OK	NA
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Manganese (FLDFLT)	6800	6700	10.0	1.48	30	OK	NA

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Arsenic (FLDFLT)	370	360	3.00	2.74	30	OK	NA

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1,1,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1,1-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1,2,2-Tetrachloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1,2-Trichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,1-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2,3-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2,3-Trichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2,4-Trichlorobenzene	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2,4-Trimethylbenzene	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801597351

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dibromo-3-chloropropane	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dibromoethane (EDB)	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dichloroethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dichloroethene	ND	ND	2.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,3,5-Trimethylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,3-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,3-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	1,4-Dichlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	2,2-Dichloropropane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	2-Butanone (MEK)	ND	ND	10.0	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	2-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	2-Hexanone	ND	ND	10.0	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	4-Chlorotoluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	4-Methyl-2-pentanone (MIBK)	ND	ND	10.0	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Acetone	ND	11.0	10.0	NA	30	NA	11.0
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Benzene	ND	1.50	1.00	NA	30	NA	1.5
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Bromobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Bromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Bromodichloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Bromoform	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Bromomethane	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801597351

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Carbon disulfide	ND	ND	2.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Carbon tetrachloride	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Chlorobenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Chloroethane	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Chloroform	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Chloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	cis-1,2-Dichloroethene	ND	0.440	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	cis-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Dibromochloromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Dibromomethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Dichlorodifluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Ethylbenzene	ND	0.430	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Hexachlorobutadiene	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Isopropylbenzene (Cumene)	ND	110	1.00	NA	30	NA	110
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	m,p-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Methyl tert-butyl ether (MTBE)	ND	ND	10.0	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Methylene chloride	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	n-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	n-Propylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Naphthalene	ND	ND	5.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	o-Xylene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	p-Cymene (p-Isopropyltoluene)	ND	2.20	1.00	NA	30	NA	2.2
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	sec-Butylbenzene	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
Long Term Monitoring
KOMAN, Long Term Monitoring, AOC 50 Fall 2018
Field Duplicates for SDG: 6801597351

Location	Analysis
G6M-04-31X	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-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Styrene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	tert-Butylbenzene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Tetrachloroethene (PCE)	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Toluene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	trans-1,2-Dichloroethene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	trans-1,3-Dichloropropene	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Trichloroethene (TCE)	0.580	0.570	1.00	1.74	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Trichlorofluoromethane	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Vinyl acetate	ND	ND	2.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	Vinyl chloride	ND	ND	1.00	NA	30	NA	OK
G6M-04-31X_FAL18 / AOC50-DUP01_FAL18	680-159735-5 / 680-159735-7	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"

C.3

Data Validation Reports
Fall 2018 Vertical Profile Event

Facility:	Long Term Monitoring
Event:	KOMAN, AOC 50 Drilling Fall 2018
SDG:	6801598891
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	James Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Savannah, GA
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2A
Primary Data Reviewer:	Laurie Ekes, Senior Project Chemist

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW8260B
G6M-18-02-GW-104-108	680-159889-3	Water	Field Sample/N	X
G6M-18-02-GW-114-118	680-159889-4	Water	Field Sample/N	X
G6M-18-02-GW-124-128	680-159889-6	Water	Field Sample/N	X
G6M-18-02-GW-84-88	680-159889-1	Water	Field Sample/N	X
G6M-18-02-GW-94-98	680-159889-2	Water	Field Sample/N	X
G6M-18-02-GW-FD-2	680-159889-5	Water	Field Duplicate/FD	X
G6M-EB02	680-159889-7	Water	Equipment Blank/EB	X
TB-01	680-159889-8	Water	Trip Blank/TB	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Savannah, GA and were reported under sample delivery group (SDG) 6801598891. 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
- Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Duplicate RPD
- 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 10 results (1.84%) out of the 544 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

The SDG contains vertical profile samples collected and submitted for VOC analysis from AOC 50 location G6M-18-02.

Analytical Method	Data Reviewer Comment
SW8260B	No additional comments; see Checklist for detail.



November 15, 2018

Reviewed by Laurie Ekes, Senior Project Chemist, KOMAN Government Solutions, LLC

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.

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 680-545954/3 (CV)/ CCV 680-545954/3	Vinyl acetate	138.0	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-545954/3 (CV)/ CCV 680-545954/3	Bromomethane	79.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCV 680-546210/2 (CV)/ CCV 680-546210/2	Bromomethane	158.8	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-546210/2 (CV)/ CCV 680-546210/2	Dichlorodifluoromethane	73.80	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-545954/30 (CV)/ CCVC 680-545954/30	Vinyl acetate	132.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-546210/30 (CV)/ CCVC 680-546210/30	Bromomethane	127.2	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-546210/30 (CV)/ CCVC 680-546210/30	Dichlorodifluoromethane	67.20	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-546210/30 (CV)/ CCVC 680-546210/30	Chloromethane	74.60	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
G6M-18-02-GW-104-108	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-114-118	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-124-128	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-84-88	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-94-98	N	Chloromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-02-GW-94-98	N	Dichlorodifluoromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-02-GW-FD-2	FD	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB02	EB	Chloromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-EB02	EB	Dichlorodifluoromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
TB-01	TB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
LCS 680-546210/4 (BS)/ LCS 680-546210/4	Bromomethane	149.6	53 - 141	10 - 141	percent	J/None	C	
LCSD 680-546210/5 (BD)/ LCSD 680-546210/5	Bromomethane	148.0	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, 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
TB-01 (TB)/ 680-159889-8	Chloroform	3.000	< 0.5	< 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
G6M-18-02-GW-104-108	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-114-118	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-124-128	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-84-88	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-02-GW-94-98	N	Chloromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-02-GW-94-98	N	Dichlorodifluoromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-02-GW-FD-2	FD	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB02	EB	Chloromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-EB02	EB	Dichlorodifluoromethane	1.00	1.00	1.00 UJ	-	ug/l	V2
TB-01	TB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
C	LCS Recovery
T	Trip 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: 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 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?	•			Sample TB-01 was the TB sample and G6M-EB02 was the EB sample submitted with this sample set,
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		See outlier report.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			Sample -2 was spiked and analyzed as MS/MSD.
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
Were surrogate recoveries within project acceptance limits?	•			
Was the laboratory duplicate RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?	•			Samples G6M-18-02-114-118 and G6M-18-02-GW-FD-2 were the FD sample pair. VOCs were ND in both 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?		•		

Facility:	Long Term Monitoring
Event:	KOMAN, AOC 50 Drilling Fall 2018
SDG:	6801598772
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	James Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Savannah, GA
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2A
Primary Data Reviewer:	Laurie Ekes, Senior Project Chemist

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW8260B
G6M-18-01-GW-100-104	680-159877-9	Water	Field Sample/N	X
G6M-18-01-GW-110-114	680-159877-11	Water	Field Sample/N	X
G6M-18-01-GW-90-94	680-159877-8	Water	Field Sample/N	X
G6M-18-01-GW-FD-1	680-159877-10	Water	Field Duplicate/FD	X
G6M-EB01	680-159877-12	Water	Equipment Blank/EB	X
G6M-TB01	680-159877-13	Water	Trip Blank/TB	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Savannah, GA and were reported under sample delivery group (SDG) 6801598772. 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
- Blank - Negative
- Continuing Calibration Verification
- Equipment Blank
- Field Duplicate 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 10 results (2.45%) out of the 408 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

The SDG contains vertical profile samples collected and submitted for VOC analysis from AOC 50 location G6M-18-01.

Analytical Method	Data Reviewer Comment
SW8260B	No additional comments; see Checklist for detail.

November 12, 2018

Reviewed by Laurie Ekes, Senior Project Chemist, KOMAN Government Solutions, LLC

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.

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 680-546363/3 (CV)/ CCV 680-546363/3	Bromomethane	73.60	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-546498/32 (CV)/ CCVC 680-546498/32	2,2-Dichloropropane	68.40	80 - 120	80 - 120	percent	J/UJ	V2	
CCVC 680-546498/32 (CV)/ CCVC 680-546498/32	Bromomethane	75.80	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-18-01-GW-100-104	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-100-104	N	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-01-GW-110-114	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-110-114	N	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-01-GW-90-94	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-FD-1	FD	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB01	EB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB01	EB	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-TB01	TB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-TB01	TB	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
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
G6M-TB01 (TB)/ 680-159877-13	Chloroform	3.600	< 0.5	< 1	ug/l	U/None	T	Blank is over 3X RL

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
G6M-18-01-GW-100-104	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-100-104	N	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-01-GW-110-114	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-110-114	N	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-18-01-GW-90-94	N	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-18-01-GW-FD-1	FD	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB01	EB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-EB01	EB	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2
G6M-TB01	TB	Bromomethane	5.00	5.00	5.00 UJ	-	ug/l	V2
G6M-TB01	TB	2,2-Dichloropropane	1.00	1.00	1.00 UJ	-	ug/l	V2

Analytes not found in project samples are reported as not detected at the limit of detection (LOD).
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Results with Modified Qualifiers

No qualifiers associated with this sample delivery group were modified manually.

Reason Code Definitions

Code	Definition
T	Trip Blank
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: 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 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?	•			Sample G6M-TB01 was the TB samples and G6M-EB01 was the EB sample.
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?			•	
Were surrogate recoveries within project acceptance limits?	•			
Was the laboratory duplicate RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	Samples G6M-18-01-100-104 and G6M-18-01-FD-1 were the FD sample pair. VOCs were ND in both 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?		•		

C.4

Data Validation Report
Winter 2019 New Monitoring Well Baseline Event

Data Validation Report for 6801634051

Facility:	Long Term Monitoring
Event:	KOMAN, AOC 50 New Wells Jan 2019
SDG:	6801634051
Guidance Document:	Quality Assurance Project Plan, Long Term Monitoring Program, Former Fort Devens, 2018
Prime Contractor:	KOMAN Government Solutions, LLC, Marlborough, MA
Project Manager:	Jim Ropp
Contract Laboratory:	TestAmerica Laboratories, Inc., Savannah, GA
Data Review Contractor:	KOMAN Government Solutions, LLC
Data Review Level:	2B
Primary Data Reviewer:	Laurie Ekes, Senior Project Chemist
Second Reviewer:	Sherri Pullar, Senior Scientist
Date Submitted:	January 30, 2019

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	SW8260B
AOC50-TB-011419	680-163405-3	Water	Trip Blank/TB	X
G6M-18-01-JAN19	680-163405-1	Water	Field Sample/N	X
G6M-18-02-JAN19	680-163405-2	Water	Field Sample/N	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page. 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, 2018 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 KOMAN Government Solutions, LLC, Marlborough, MA; analyses were performed by TestAmerica Laboratories, Inc., Savannah, GA and were reported under sample delivery group (SDG) 6801634051. 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
- Blank - Negative
- Continuing Calibration Verification
- 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 0 results (0.00%) out of the 204 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected. 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

This SDG contains two AOC50 new wells sampled for VOCs.

Analytical Method	Data Reviewer Comment
SW8260B	No additional comments; see Checklist for detail.

January 30, 2019

Reviewed by Laurie Ekes, Senior Project Chemist, KOMAN Government Solutions, LLC

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.

January 30, 2019

Reviewed by Sherri Pullar, Senior Scientist, KOMAN Government Solutions, LLC

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 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 680-555967/3 (CV)/ CCV 680-555967/3	Styrene	121.6	80 - 120	80 - 120	percent	J/None	V2	
CCV 680-555967/3 (CV)/ CCV 680-555967/3	Dichlorodifluoromethane	127.0	80 - 120	80 - 120	percent	J/None	V2	
CCVC 680-555967/29 (CV)/ CCVC 680-555967/29	Bromomethane	67.20	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.

No results associated with this QC element required qualification.

Qualified Results

No results associated with this sample delivery group required qualification.

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260B

FieldSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AOC50-TB-011419	TB	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-18-01-JAN19	N	Bromomethane	5.00	5.00 U	5.00 UJ	5.00 U	
G6M-18-02-JAN19	N	Bromomethane	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).
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
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: 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?		•		See outlier report. Closing CCV within +/- 50%.
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?	•			Sample -3 was a TB sample.
Were target analytes reported in the field blank(s) less than MDL?		•		
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?		•		
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?			•	
Were QAPP specified laboratory LOQs/RLs achieved?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data rejected during the verification process?		•		

APPENDIX D
HISTORICAL GROUNDWATER RESULTS

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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
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	6.16	0.45	149.6	0.479	65	13.4

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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
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	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	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	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	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	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-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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-04-12X	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
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-04-22X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-04-31X	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-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-13-06X	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-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
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	11/8/2016	1.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	3.0 U	0.05 U	760	-	-	-	-	-	2.68	1.7	67.5	2.952	3.39	12.48
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-95-20X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-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
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	12/14/2004	2,400	2U	2U	2U	1U	2U	0.015	0.096	1500	5U	1U	120	5U	25	1.7	13	2U	5.89	2.81	215.4	0.965	2.04	9.62
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

Historical Groundwater Analytical Results
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			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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	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	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	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	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	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-04-10X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-04-13X	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-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 2	G6M-02-01X	2/28/2002	11	2U	2U	2U	1U	2U	-	-	-	-	-	-	-	-	-	-	-	6.91	4.7	66.6	0.624	14	13.53

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	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	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	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	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	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-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-04-03X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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
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-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	6.6	1.20	-74.9	1.743	30	14.38

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	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	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	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	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-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	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	9.1	1.0 U	6.01	0.9	-22.7	1.317	0.58	12.12
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	9/13/2007	600	130	210	2.0	1.2	300	0.005J	7.0	18,000	280	130	25,000	63	270	0.2U	890	1.2	6.57	3.2	-186.6	2.398	3.5	13.04
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-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 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
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	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	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	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	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	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-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-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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
Area 4	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 4	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 4	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 4	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 4	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 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-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 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	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-02-07X	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
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-02-11X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-02-12X	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-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
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	-

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	10/4/2017	1.0 UJ	1.0 UJ	0.50 J	1.0 UJ	1.0 UJ	1.0 UJ	1.1 U	0.90 J	91	6.6	0.23	6,900	0.84 J	110	0.05 U	9.5	1.0 U	6.70	0.65	-29.9	0.374	5.94	13.29
Area 5	G6M-03-08X	10/31/2018	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-03-09X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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
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-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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-04-06X	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
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-04-07X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-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
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-13-04X	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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-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-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-18-02	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	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
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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	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	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	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	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	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-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	5/16/2002	5,700	4.3	2U	2U	1U	2U	0.097	0.2	9	5U	1U	1,000U	5U	-	4.3	18J	2.0UJ	6.05	0.21	185	0.759	23.9	10.92
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

Historical Groundwater Analytical Results
AOC 50, Former Fort Devens Army Installation, 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	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)	(SU)	(mg/L)	(mV)	(mS/cm)	(NTUs)	°C
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-12-96X	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
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-12-97X	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-12-98X	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
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

Notes:

cis-1,2-DCE = cis-1,2-Dichloroethene.
1,1-DCE = 1,1-Dichloroethene.
J = Estimated result.
µg/L = microgram per liter.
mg/l = milligram per liter.
ND (U) results are reported at the Limit of Detection (LOD).
PCE = Tetrachloroethene.
TCE = Trichloroethene.
TOC = Total Organic Carbon.
trans-1,2-DCE = trans-1,2-Dichloroethene.
U = Non-detect.
UJ = Estimated non-detect.
VC = Vinyl chloride.



APPENDIX E
ANNUAL LAND USE CONTROL PLAN CHECKLIST 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: Laurie Ekes/KGS	
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 Department of Public Works permits found?		X	
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: Melissa Miller - KGS - Inspected AOC50 during Fall 2018 LTM sampling in October.			
Item	Yes	No	Comments
Any construction activities or new buildings present in the area of the remedy?		X	
Is there evidence of damage to the remedy?		X	
Any groundwater supply wells present?		X	No new water supply wells have been added.
Any construction detention ponds?		X	
Is there sufficient access to the site for monitoring?	X		Two new wells will be installed on the Western edge of the AOC50 plume in December 2018.

IV. Interview			
Name of Interviewer: Laurie Ekes/KGS			
Name of Interviewee: Ron Ostrowski			
Position: Environmental Services, Mass Development			
Contact Information: Phone (978) 784-2900 Email: Rostrowski@Massdevelopment.com			
Date/Location of Interview: November 7, 2018 Had a telephone conference call with Ron Ostrowski of Mass Development.			
Item	Yes	No	Comments
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		IC letter was sent to Mr. Eagle and Mr. Woodle on June 4, 2018. A copy of the letter was emailed to Ron on 11/7/18.
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	Sampling events are scheduled around Mass State Police training on the runway.
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	

If any responses above are "Yes", please provide comments.

Annual Land Use Control Plan Checklist for AOC 50			
IV. Interview			
Name of Interviewer: Laurie Ekes/KGS			
Name of Interviewee: Mr. Tom Eagle			
Position: Project leader; Eastern Massachusetts NWR Complex; Oxbow National Wildlife Refuge			
Office: USFW, 73 Weir Road, Sudbury, MA 01776			
Contact Information: Email: Tom_eagle@fsw.gov Phone (978) 579-4027.			
Dates of email/interview: November 7, 2018 - sent an email to Mr. Eagle with interview questions. November 13, 2018 - Mr. Eagle responded in an email with responses to interview questions.			
Item	Yes	No	Comments
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		An IC letter was sent to Mr. Eagle on June 4, 2018.
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	

If any response above are "Yes", please provide comments.

Annual Land Use Control Plan Checklist for AOC 50

IV. Interview

Name of Interviewer: Laurie Ekes/KGS

Name of Interviewee: Mr. Henry Woodle

Position: Groton Ayer Realty Trust

Office: Fitchburg Road, Ayer, MA (mailing address PO Box 353, Ayer, MA 01432)

Contact Information: Phone (978) 449-0100. Email: HTWoodle@gmail.com

Dates of email/interview: November 7, 2018 - sent an email to Mr. Woodle with interview questions. November 13, 2018 - Spoke to Mr. Woodle on the phone to follow up on 11/7/18 email. He acknolweded receipt of the reinforcement letter and stated he did not know of any issues.

Item	Yes	No	Comments
Has the interviewee received/read the annual IC notification/reinforcement letter from the Army?	X		IC Letter was sent to Mr. Woodle on June 4, 2018.
Is interviewee familiar with the land use controls imposed upon the property & documentation of these controls?	X		Mr. Woodle noted that he is intereseted in pursuing removal of the LUC restrictions on this area of the North Plume.
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	

If any responses above are "Yes", please provide comments.

June 4, 2018

Mr. Tom Eagle
Deputy Wildlife Refuge Manager
Eastern MA NWR Complex
73 Weir Hill Rd.
Sudbury, MA 01776

RE: Land Use Control (LUC) Reinforcement Letter
For CERCLA Remedy at Area of Contamination (AOC) 50
Former Fort Devens Army Installation, Devens, MA
Contract No. W912WJ-18-C-0011

Dear Mr. Eagle,

KOMAN Government Solutions, LLC (KGS) is pleased to submit this LUC Reinforcement Letter on behalf of the United States Department of the Army (the "Army"). The U.S. Fish & Wildlife Service 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 by Route 2A in Ayer, Massachusetts is present in the groundwater underlying the transferred land. The MOA for the U.S. Fish & Wildlife Service 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. The subject area is 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 MassDEP to monitor wells, maintain remedy, and make annual inspections of the property to confirm compliance with land use objectives.

KOMAN Government Solutions, LLC
293 Boston Post Road West, Suite 100
Marlborough, Massachusetts 01752
Phone (508) 366-7442
Fax (508) 366-7445
www.komangs.com

If your contact information changes, please send the following information to the attention of Mr. Robert Simeone at the address listed below.

Organization Name
Mailing Address
General Telephone Number and Facsimile Number (if available)
Email Address

Mr. Robert Simeone
U.S. Army Garrison Fort Devens
30 Quebec Street
Building 666, Room 132
Devens, MA 01434-4479

If you have further questions concerning this matter, please contact Mr. Robert Simeone at 978-796-2205. The Army will continue to send letters every year as a reminder of this restriction. You will also receive a letter notifying you that the restriction is removed, when all actions to protect human health and the environment are deemed complete by the appropriate regulatory agencies.

Sincerely,
KOMAN Government Solutions, LLC

Mr. James Ropp, P.E.
Project Manager

Encl: Limits of Land Use Controls Map

cc: Robert Simeone, BRAC Devens
Penny Reddy, USACE
Carol Keating, USEPA
Laurie O'Connor, USEPA
David Chaffin, MassDEP
Ron Ostrowski, MassDevelopment
KGS File

LIMITS OF OFF-SITE LUC

GFI AYER LLC

80.36'

711.90'

343.85'

371.17'

201.72'

324.39'

LIMITS OF NORTH PLUME

184.85'

60.57'

354.59'

156.93'

MERRIMACK WAREHOUSE

MERRIMACK WAREHOUSE, INC.

N30°35200 E628080

R=12004.93' L=1013.87'

R=9005.50' L=313.36'

728.33'

N59°57'12"W 86'

658.25

N65°25'39"W 384.54'±

825'±

S25°52'W 181'±

385'±

N61°30'W

S30°52'54"E 2010.13'

N69°49'E 180'±

N27°40'W 197'±

N62°27'W 302'±

155'± S10°12'E

292.20'

S53°52'17"E

S29°27'W 276.97'

S0°34'59"E 43.9'

LIMITS OF SOURCE AREA LEASED PARCEL A.5

LIMITS OF SOURCE AREA

S27°27'24"E 189.27'

N71°14'33"E 178.95'

N67°50'01"E 192.01'

N45°28'53"E 138.36'

LIFC A.16

S0°00'00"W 73.20'

451.16' N0°00'00"W

US ARMY RETAINED PARCEL H

S27°32'24"E 1819.43'

83.18'

200'±

30'±

289'±

988'±

627'±

183'±

591'±

65'±

S35°14'0"E 406.89

S65°23'22"E 529.96'

L=664'±

1500'±

N0°34'30" E627130

LIMITS OF SOUTHWEST PLUME

LIMITS OF MASSDEVELOPMENT SOUTHWEST PLUME PARCEL

S25°25'55"E 805.94'

178.50' S82°26'57"E

S51°06'38"E 803.14'

S26°38'33"E 1091.42'

S66°11'35"E 2.97'

S70°56'26"E 177.71'

926'±

N44°09'35"E 1.44'

S86°10'44"E 953.72'

128.22' S7°11'52"E

S51°43'58"E 86.07'

S14°48'53"W 144.97'

S7°09'38"W 156.57'

S84°40'58"W 1.90'

S36°54'01"E 71.17'

584.85' N85°10'32"W

S39°03'25"W 169.57'

S0°11'32"E 198.10'

S3°56'11"E 327.42'

N88°36'23"E 52.05'

N44°48'19"E 733.50'

S2°05'39"E 228.70'

S89°06'55"E 88.88'

S0°43'42"E 201.17'

S47°18'43"E 48.47'

S30°24'45"E 128.04'

FILTER BED ROAD

LIMITS OF U.S. FISH & WILDLIFE SERVICE SOUTHWEST PLUME PARCEL

NASHUA RIVER

N12°31'45"W 204.09

N13°27'15"E 168.60

N0°05'37"E 504.54

N14°09'00"E 122.74

N0°25'22"E 284.47

N46°53'37"W 230.25

N07°22'33"W 235.17

N34°53'29"W 141.66

S86°20'35"W 161.57

N43°36'54"W 155.37

N54°58'51"W 106.82

N76°36'08"W 180.53

N86°08'28"W 446.50

N47°31'24"W 246.02

N61°10'51"W 239.49

N26°34'34"W 573.01

N14°41'19"W 289.52

N0°07'21"W 213.02

0 300 FEET

N

LEGEND:

- LIMITS OF NORTH PLUME
- LIMITS OF SOURCE AREA
- LIMITS OF SOUTHWEST PLUME

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Area Manager	D. KNOX
Project Director	C. CASTELLUCCIO
Task Manager	C. CASTELLUCCIO
Technical Review	

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	3

Acad Version : R16.2s (LMS Tech) Date\Time : Wed, 13 Feb 2008 - 1:12pm
User Name : btherriault Path\Name : G:\ENV\FORT DEVENS\MA000664\ENV\CAD\FD-005.dwg
Current Pctstyle : ByColor
Layout Tab: Layout1

June 4, 2018

Mr. Henry Woodle
Merrimack Warehouse Realty Co., Inc.
P.O. Box 353
Ayer, MA 01432

RE: Land Use Control (LUC) Reinforcement Letter
For CERCLA Remedy at Area of Contamination (AOC) 50
Former Fort Devens Army Installation, Devens, MA
Contract No. W912WJ-18-C-0011

Dear Mr. Woodle,

KOMAN Government Solutions, LLC (KGS) is pleased to submit this LUC Reinforcement Letter on behalf of the United States Department of the Army (the "Army"). The Merrimack Warehouse Nominee Trust 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 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. The subject area is 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. However, these restrictions were updated in a LUC Agreement between Merrimack Warehouse Nominee trust and the United States Department of the Army on July 20, 2006.

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 Warehouse 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 Warehouse's buildings in the event they are triggered as required by fire codes and Merrimack Warehouse's insurer.

- Merrimack Warehouse will provide access to the Army, USEPA, and MassDEP to monitor wells and make annual inspections of the property to confirm compliance with land use objectives.

If your contact information changes, please send the following information to the attention of Mr. Robert Simeone at the address listed below.

Organization Name
Mailing Address
General Telephone Number and Facsimile Number (if available)
Email Address

Mr. Robert Simeone
U.S. Army Garrison Fort Devens
30 Quebec Street
Building 666, Room 132
Devens, MA 01434-4479

If you have further questions concerning this matter, please contact Mr. Robert Simeone at 978-796-2205. The Army will continue to send letters every year as a reminder of this restriction. You will also receive a letter notifying you that the restriction is removed, when all actions to protect human health and the environment are deemed complete by the appropriate regulatory agencies.

Sincerely,
KOMAN Government Solutions, LLC



Mr. James Ropp, P.E.
Project Manager

Encl: Limits of Land Use Controls Map

cc: Robert Simeone, BRAC Devens
Penny Reddy, USACE
Carol Keating, USEPA
Laurie O'Connor, USEPA
David Chaffin, MassDEP
Ron Ostrowski, MassDevelopment
KGS File

LIMITS OF OFF-SITE LUC

GFI AYER LLC

80.36'

711.90'

343.85'

371.17'

201.72'

324.39'

LIMITS OF NORTH PLUME

184.85'

60.57'

354.59'

156.93'

MERRIMACK WAREHOUSE

MERRIMACK WAREHOUSE, INC.

N30°35200 E628080

R=12004.93' L=1013.87'

R=9005.50' L=313.36'

728.33'

N59°57'12"W 86'

658.25

N65°25'39"W 384.54'±

825'±

S25°52'W 181'±

385'±

N61°30'W

S30°52'54"E 2010.13'

N69°49'E 180'±

N27°40'W 197'±

N62°27'W 302'±

155'± S10°12'E

292.20'

S53°52'17"E

S29°27'W 276.97'

S0°34'59"E 43.9'

LIMITS OF SOURCE AREA LEASED PARCEL A.5

LIMITS OF SOURCE AREA

S27°27'24"E 189.27'

N71°14'33"E 178.95'

N67°50'01"E 192.01'

N45°28'53"E 138.36'

LIFC A.16

S0°00'00"W 73.20'

451.16' N0°00'00"W

US ARMY RETAINED PARCEL H

S27°32'24"E 1819.43'

83.18'

200'±

30'±

289'±

988'±

627'±

183'±

591'±

65'±

S35°14'0"E 406.89

S65°23'22"E 529.96'

L=664'±

1500'±

N0°34'30" E627130

LIMITS OF SOUTHWEST PLUME

LIMITS OF MASSDEVELOPMENT SOUTHWEST PLUME PARCEL

S25°25'55"E 805.94'

178.50' S82°26'57"E

S51°06'38"E 803.14'

S26°38'33"E 1091.42'

S66°11'35"E 2.97'

S70°56'26"E 177.71'

926'±

N44°09'35"E 1.44'

S86°10'44"E 953.72'

128.22' S7°11'52"E

S51°43'58"E 86.07'

S14°48'53"W 144.97'

S7°09'38"W 156.57'

S84°40'58"W 1.90'

S36°54'01"E 71.17'

584.85' N85°10'32"W

S39°03'25"W 169.57'

S0°11'32"E 198.10'

S3°56'11"E 327.42'

N88°36'23"E 52.05'

N44°48'19"E 733.50'

S2°05'39"E 228.70'

S89°06'55"E 88.88'

S0°43'42"E 201.17'

S47°18'43"E 48.47'

S30°24'45"E 128.04'

FILTER BED ROAD

LIMITS OF U.S. FISH & WILDLIFE SERVICE SOUTHWEST PLUME PARCEL

NASHUA RIVER

N12°31'45"W 204.09

N13°27'15"E 168.60

N0°05'37"E 504.54

N14°09'00"E 122.74

N0°25'22"E 284.47

N46°53'37"W 230.25

N07°22'33"W 235.17

N34°53'29"W 141.66

S86°20'35"W 161.57

N43°36'54"W 155.37

N54°58'51"W 106.82

N76°36'08"W 180.53

N86°08'28"W 446.50

N47°31'24"W 246.02

N61°10'51"W 239.49

N26°34'34"W 573.01

N14°41'19"W 289.52

N0°07'21"W 213.02

0 300 FEET

N

LEGEND:

- LIMITS OF NORTH PLUME
- LIMITS OF SOURCE AREA
- LIMITS OF SOUTHWEST PLUME

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Area Manager	D. KNOX
Project Director	C. CASTELLUCCIO
Task Manager	C. CASTELLUCCIO
Technical Review	

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	3

Acad Version : R16.2s (LMS Tech) Date\Time : Wed, 13 Feb 2008 - 1:12pm
User Name : btherriault Path\Name : G:\ENV\FORT DEVENS\MA000664\ENV\CAD\FD-005.dwg
Current Pctstyle : ByColor
Layout Tab: Layout1

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 F
RESPONSES TO COMMENTS

U.S. ARMY RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE 2018 ANNUAL OPERATION AND MAINTENACE AND MONITORING REPORT AREA OF CONTAMINATION 50 FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MASSACHUSETTS October 2019

The following U.S. Army responses pertain to the U.S. Environmental Protection Agency comments, dated 15 July 2019, on the *2018 Annual Operation and Maintenance (O&M) and Monitoring Report, Area of Contamination (AOC) 50* at the Former Fort Devens Army Installation, Devens, Massachusetts, dated April 2019.

General Comments

Comment #1: Through 2014, ERD injections were conducted at least semi-annually (monthly in earlier years of the remedy). However, only one injection event was conducted during 2015 (the Supplemental ERD Injection), and no injections were conducted in 2016. New injection events occurred in July 2017 and August-September 2018, and these injection events used a combination of selected existing injection wells and direct push Geoprobe injections. Results indicate that the 2017 and 2018 injections were generally effective. EPA reviewed a draft LTMMP for AOC 50, dated May 2017, and Army's response to EPA's Specific Comment 2 regarding the LTMMP indicated that the need for injections will be evaluated annually and a brief Memorandum will be provided to the regulatory agencies 60 days before each injection event. Based on the effectiveness of the 2017 and 2018 injections and some local rebound effects in 2016, when there was no injection, EPA agrees with an annual evaluation as to whether an injection is needed (strong consideration should be given to areas with remaining elevated PCE and TCE and with TOC less than the ideal 20 mg/L range). Army should provide a draft copy of the annual evaluation to regulators for review and comment prior to rendering a final decision regarding the need for additional injections.

> **Response:** Comment noted. An evaluation on the performance of injections is placed within the LTM annual reports. Going forward, a recommendation on whether additional injections are needed or not, will be inserted in Section 6.0 of the Annual Report. The injection program memorandum will continue to be provided to regulators.

Comment #2: The Report concludes, qualitatively, that remedial actions are reducing groundwater concentrations of both PCE and TCE. EPA appreciates that the 2017 and 2018 Annual Reports include a discussion of TCE results in addition to PCE results. In the 2016 Annual Report, 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) concentrations were not decreasing or stable. In comments on the 2017 Annual Report, EPA recommended that these five wells be tracked and discussed in subsequent years' reports, because they appear to represent exceptions to Army's general conclusion of decreasing concentrations. The 2017 and 2018 Annual Reports documented that most of these same wells are still not exhibiting decreasing concentrations of PCE. A steady decrease was noted in only G6M-07-02X in 2017 and only in G6M-07-02X and G6M-13-05X in 2018, while G6M-04-02X showed fluctuations in PCE concentration. G6M-97-05B shows fluctuating, increasing concentrations (Figure 4-13), while the trend for G6M-04-07X appears unclear. Army should continue to provide a discussion of noteworthy trends in these five wells in future reports, as rebounds in PCE concentrations may continue to occur after a few months following injections.

> **Response:** Comment noted. Evaluations on the performance of the remedy and data concentration trends on these wells will continue in Annual Reports.

Comment #3: In general, EPA agrees that the remedies applied in AOC 50 have reduced PCE concentrations in many portions of the plume and have succeeded in segmenting the plume as illustrated by historical iso-concentration contour maps (Figures 4-2 through 4-4). However, the contours optimistically suggest definitive plume delineation in areas where the contaminant extent may still be unknown. Please revise the contours to acknowledge the uncertainty.

Response: The extents of the plume are sufficiently well established based on current and historic results below the PCE cleanup goal of 5 micrograms per liter (µg/L) such that the contours can be depicted with solid, rather than dashed lines. Recently, the results of the newly installed monitoring wells G6M-18-01 and G6M-18-02 have bound the plume to the west. The contours also are appropriately labeled as "interpretive".

Comment #4: The 2014 and 2015 data showed that significant contamination either remained or was not fully characterized along the western edge of Area 1 and Transects 4 and 5. Two new monitoring wells, G6M-18-01 and G6M-18-02, installed west of Transects 4 and 5 in January 2019 to define the western edge of the plume, assumed that the screen elevations for the new wells were at the same elevations of nearby wells (G6M-13-02X and G6M-97-05B) and that PCE concentrations would remain below 5 µg/L (or non-detect) in subsequent monitoring rounds. Please confirm that these two wells will be included in Fall 2019 and 2020 LTM events.

Response: Confirmed. These wells will be sampled annually for three years (i.e., 2018, 2019, and 2020).

Comment #5: In General Comment 7 on the 2016 Annual Report, EPA referenced the 2014 MiHPT report (included as Appendix A of the 2014 Annual Report), 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 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 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) 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, the previous history of fluctuating concentrations in this well, in combination with the fact that wells cited by Army (response to Comment 9 on the 2017 Annual Report) as "appropriately screened to monitor PCE concentrations migrating from (the FDSA)" are actually screened significantly deeper than the injection depth, indicate that it is premature to conclude that the FDSA is adequately characterized or that future rebounds will not occur. MiHPT or other investigations of the FDSA may be needed in the future.

Response: Comment noted. The effectiveness of the remedy at the FDSA will continue to be evaluated along with any back-diffusion effects, as part of the groundwater monitoring program.

Comment #6: The 2017 and 2018 injections used a combination of existing injection wells and direct push borings, as proposed in the "*Area of Contamination 50, 2018 Injection Plan Summary"*. This approach provides flexibility regarding injection locations and appears to have successfully reduced contaminant concentrations in some locations that have not been addressed previously. EPA believes that this approach should continue, with regulator consultation/concurrence regarding injection locations, depths, and other parameters.

Response: Comment noted. A combination of using both direct push, and existing injection wells will be considered during the planning of future injection event(s). The need for continued injections in AOC 50 Areas 1 through 5 will be evaluated based on the results from the semi-annual groundwater monitoring program (e.g., contaminant concentration trends, redox conditions, residual TOC concentrations) and recommendations will be made in Annual Reports.

Comment #7: 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 does not appear to hold true near Area 5, where a group of wells located down-gradient of the former injection transect (G6M-02-11X, G6M-02-12X, G6M-03-10X) has elevated arsenic levels, even though there was no injection at all in 2016 and the 2017 injections were done via direct push at locations northwest (side gradient) of the wells in question. Despite the lack of injection in 2017, arsenic levels remained almost as identically high in these three wells as the levels in 2016. These conditions were less pronounced in 2018 and may be explained by differing injection locations and monitoring well screen depths that differ from injection depths, as pointed out by Army. Please continue to track these conditions (in Area 5 and elsewhere if noted) for further evaluation in the 2019 Annual Report.

Response: This area is still reducing from the 15 years of injections and is an example of the slow process for an aquifer to revert back to oxic conditions sufficient to sequester metals. The Army will continue to sample and evaluate arsenic concentrations in the AOC 50 plume as part of the remedy performance monitoring program.

Specific Comments

Comment #1: Page 1-3, Section 1.2, "Summary of Past Groundwater Treatment at AOC50", ¶ 1 –Since the plume is known to extend considerably farther to the west in this area, the location of the IWS system should not be described as "at the western edge of the plume." Please revise the text to more accurately describe the location as "downgradient of Area 5."

Response: The text has been revised as suggested:

"In September 2004, ARCADIS U.S., Inc./G&M, Inc. (ARCADIS) implemented a full-scale remedial action at AOC 50 that included soil vapor extraction in the source area, ERD throughout the plume, and an in-well stripping (IWS) system downgradient of Area 5."

Comment #2: Page 1-4, Section 1.3, ¶ 2 – The depths to groundwater provided here (3 ft in the Source Area; 64 ft at the southwestern end (of the plume)) differ by several feet from 2018 water level data collected over the years. Please explain this apparent discrepancy and amend the text, as/if necessary.

Response: The text has been revised for accuracy to read as follows:

"In 2018, groundwater was encountered at approximately 10 feet below ground surface (bgs) in the AOC 50 Source Area and at approximately 60 feet bgs towards the southwestern end of the former MAAF".

Comment #3: Page 1-5, Section 1.4, 4th bullet – "Direction push" should be changed to "direct push".

Response: The text has been corrected accordingly.

Comment #4: Page 2-1, Section 2.1, ¶ 2 – A brief explanation of ZVI should be provided here, with criteria for when it is used and not used. In Section 2.1.2, a reason is given for not using ZVI, and this appears to be the first time that ZVI was used. Is this a substance that was used in the past, but is no longer used? Please explain.

Response: As described in Section 1.2, ZVI is part of the product ABC® Ole'+. An explanation of using this product is provided in Section 2.1, with a brief history in Section 1.2. The reference in Section 2.1.2 has been removed and re-inserted at the end of the first paragraph in Section 2.1 for clarity on why it is not used in injection wells. A reference to Section 1.2 has been added to the text.

Comment #5: Page 2-1, Section 2.1.1, Area 1 – In 2017, of the 16 direct injection locations in the Building 3803/3840 area, seven injections encountered refusal five to seven feet shallower than the planned injection depth. This information is significant enough to guide future injection plans, and EPA appreciates that Army showed selected, representative refusals on cross section C-C' in the 2018 Report (Figure 4-10). In 2018, only one such refusal occurred in the FDSA Area. However, six of eleven direct push injections in the Building 3803/3840 area encountered refusal shallower than the intended target depths. Please also show the refusals on the inset in Figure 2-1. These refusal depths should also be documented in a new table or by adding a column to an existing table. This information could guide future injection plans by eliminating locations known to be problematic for reaching the desired injection depths.

Response: Figure 2-1 has been updated to include the end depth of all DPT injection points. Refusal is already noted in the notes section of Table 2-1.

Comment #6: Page 3-1, Section 3.2, 1st bullet – Please amend the last sentence to clarify whether the pump intakes were placed at two feet for all pumps or just the peristaltic pumps?

Response: The text has been revised to read as follows:

"All pump intakes, or tubing (if a peristaltic pump was used)…."

Comment #7: Page 3-2, Section 3.5.1, last sentence – Please amend the text in the final 2018 Annual Report to specify the date the missing locks were replaced (now that it is Summer 2019).

Response: The text has been revised to indicate that the locks will be replaced in 2019. The text will be amended to give a specific date if completed by the submittal of the final 2018 Annual Report. If not, the date the locks will be replaced will be inserted into the 2019 Annual Report.

Comment #8: Page 4-1, Section 4.1.1, ¶s 2 and 3 – The pH range in October 2018 appears quite large; what pH range would be considered ideal in an ERD process? The well with the highest pH in October 2018 is G6M-12-97X and is discussed at the end of the paragraph. Please continue to track the pH and related chemistry at G6M-12-97X for discussion/evaluation in the 2019 Annual Report.

Response: Optimal pH to support reductive dechlorination is 6 to 8. The geochemistry of the aquifer will continue to be monitored. Additional text has been added to the end of the paragraph as follows:

"pH will continue to be evaluated in order to optimize the injection program."

Comment #9: Page 4-2, Section 4.1.1, next-to-last paragraph – In the 2017 Annual Report, Army noted areas in the western portion of the plume near Areas 4 and 5 where "reducing conditions are not consistently present", but Army predicted that "reducing conditions will become more prevalent as the injected substrate migrates through the aquifer." In the 2018 Annual Report, Army noted the same phenomena, indicating

that the prediction has not yet come true. How long should it take for the injected substrate to migrate through the aquifer such that reducing conditions are "more prevalent"? Is there some other plausible explanation for these areas of low DO and inconsistent reducing conditions (i.e. G6M-13-02X, G6M-13-01X, G6M-97-05B)? Army should continue to monitor these areas for an expanded, more in-depth evaluation of its predictions in the 2019 Annual Report.

Response: After further review, monitoring well G6M-13-02X has been removed from this discussion as the samples there had a negative ORP and a DO less than 0.5 mg/L (i.e., reducing conditions). Additionally, although this section is discussing field parameter results, when looking at the methane concentration at this well (6.7 mg/L), the area is indicative of strongly reducing conditions. Further, the DO and ORP, as shown in Figure 4-1, are displaying a downward trend for monitoring well G6M-13-01X and indicate that upgradient injections are slowly having an impact on downgradient DO and ORP. It is suspected at G6M-97-05B is screened within a finer-grain matrix, with a lower hydraulic conductivity (and thus groundwater velocity) which is causing the delay in decreasing DO and ORP. This section has been re-written for accuracy, as follows:

"Within the western portion of the plume in Areas 4 and 5, the DO (less than 1 mg/L) and negative ORP are indicating that the aquifer is reducing. This may be the result of upgradient injections (previous, and/or current) which may be starting to impact the groundwater chemistry. The fall ORP at monitoring well G6M-13-01X was negative, which is the first time a negative ORP has been recorded at this well. This may indicate that upgradient injections are beginning to influence the groundwater chemistry in this area. The DO (greater than 1 mg/L) and ORP (positive value) at monitoring well G6M-97-05B indicate that this well has not been influenced by upgradient injections yet. Given, the suspected lower conductivity at this well (10^{-3} to 10^{-4}cm/sec), this well will need to be monitored overtime to determine any effects."

Comment #10: Page 4-3, Section 4.1.2, 2nd and 3rd bullets – Please expand the discussion of dechlorination in well G6M-13-05X to include results from May 2018 sampling (prior to 2018 injections). Table 4-2 shows that for this well, TCE and cis-1,2-DCE were elevated in addition to PCE.

Response: The text has been updated to include a discussion on the spring 2018 data for PCE, TCE, and cis-1,2-DCE. The following revised text has been inserted:

*"PCE has not been detected, and/or has been consistently detected below the MCL (5 µg/L), in most source area (Area 1) wells. At G6M-13-05X, prior to the 2018 August/September injection event, the spring 2018 concentrations were 59 µg/L-PCE, 81 µg/L-TCE, and 410 µg/L-cis-1,2-DCE. Following the 2018 August/September injection event, PCE was not-detected, and concentrations of TCE and cis-1,2-DCE decreased to 2.7 J and 250 µg/L, respectively, in fall (October) 2018. This is the first time since sampling was initiated at this location in 2014, that PCE was not detected and below the MCL (5 µg/L) (**Appendix D**). The non-detect result, coupled with the decreases in TCE along with cis-1,2-DCE and vinyl chloride generation, suggest that reductive dechlorination is continuing at this location as a result of previous injection events as well as the 2018 August/September injection event. Additionally, ethene and ethane were detected at the highest concentrations in this well (when analyzed for) indicating that late stage dechlorination is occurring. The concentrations will be monitored in spring 2019 to assess if these reductions are sustained or if there is rebound."*

Comment #11: Page 4-4, Section 4.1.2, 5th bullet – In the 2017 Report, Army pointed out the increase in PCE concentration in G6M-13-04X in 2017 (Section 4.1.2, 4th bullet). These results suggested that the well, located between the 2017 direct injection locations and the Area 5 injection well transect, might be in a spatial groundwater gap. EPA requested, in comments on the 2017 Annual Report, that IW-1, IW-6, and IW-39 be included in the next injection to effectively remediate increasing levels of PCE in this vicinity.

In 2018, Army used IW-6, IW-39, and G6M-02-05X, located upgradient of G6M-13-04X, as injection points. Results for G6M-13-04X were non-detect for PCE both before and after the 2018 injections. Does this mean that this well was unaffected by the 2018 injections? Could there have been a delayed effect from the 2017 injections, despite their location? What are the relative depths of the G6M-13-04X and the various injection wells and direct push points? What could explain the significant decrease in PCE concentrations at this location in a year's time? Army should continue to monitor this area for further evaluation in 2019 Annual Report.

Response: It is possible that there was a delayed effect from the 2017 injection event, as well as an impact from the 2018 injection event. The screens elevations are as follows: G6M-13-04X (138.81 to 128.81 NAVD88); IW-6 (149.17 to 129.17 NAVD88); IW-39 (138.94 to 118.94 NAVD88); and G6M-02-05X (144.6 to 129.6 NAVD88). The 2018 DPT injection points were cross-gradient. Further evaluation in 2019 is needed to explain the decreases.

Comment #12: Page 4-7, Section 4.1.4, ¶ 1 – The last sentence is unclear and needs further explanation. What is the relationship between sulfide and hydroxide? How does all this relate to ferrous minerals and dechlorination? Is there evidence that these phenomena are occurring at AOC 50?

Response: The text has been revised for clarity to read as follows:

"Also, sulfide present in the aquifer can bind with metals (e.g., iron) to form iron-sulfides that have create reactive surfaces similar to ZVI that can dechlorinate chlorinated ethenes through abiotic transformation. This is a beneficial side effect of the ERD process where abiotic reductive dechlorination has been observed to continue to remediate sites even after ERD rates decline. No direct measurements of abiotic degradation have been performed at AOC 50 to evaluate the extent of this degradation process.".

The lack of sulfide through laboratory analysis in combination with high concentrations of iron, along with relatively low concentrations of daughter products are good indicators that parent compounds are dechlorinating through abiotic transformation. However, it is important to note, that abiotic transformation often occurs concurrently with biotic transformation and the dominant process can often be difficult to segregate.

Comment #13: Page 4-10, Section 4.2.2 – Please provide the screen elevations for the new wells in addition to the screen depths below ground surface. This will allow verification that the new wells were screened at the optimal depths.

Response: The wells were surveyed in April 2019 after the draft Annual Report has been submitted, which is why the elevations were not included. The text and Table 4-1 have been updated with the newly surveyed screen elevations.

Comment #14: Page 5-1, Section 5.0, last ¶– Please provide a copy of the "September 2007 Addendum to the Real Property Master Plan."

Response: A copy of the September 2007 Addendum to the Real Property Master Plan will be provided.

Comment #15: Page 5-3, Section 5.0, last ¶– Army reports that Mr. Henry Woodle of the Groton Ayer Realty Trust expressed an interest "in pursuing the removal of LUC restrictions in the North Plume area" during a recent interview. As you are aware, the removal of the LUCs would require a formal request from Mr. Woodle, with supporting documentation and data, in conjunction with Army's submittal of a draft ROD amendment to the regulators. EPA recommends that Army share recent PFAS sampling results from existing North Plume monitoring wells with Mr. Woodle, if it hasn't done so already. Army should keep the BCT appraised of future discussions with the landowner regarding this matter.

Response: Comment noted. The Army will share the results of the PFAS investigation that is planned to be conducted on Mr. Woodle's property. The Army will keep the BCT appraised of such future discussions with the landowner.

Comment #16: Figure 1-2 – In the Legend, for the red Injection Well entry, EPA suggests adding "Prior to 2014." With the passage of time or for new readers unfamiliar with site history, it may not be clear that these wells preceded the ones installed in 01/2014. This change should be carried through all figures that show injection wells. Also, the figure has a label and arrow for "IWS System Enclosure", but the enclosure is not shown on the figure; please add this feature, as it is discussed in the text. The same edit is needed on several other figures.

Response: The figures have been updated as suggested.

U.S. ARMY SECOND RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY FOLLOW-ON COMMENTS ON THE 2018 ANNUAL OPERATION AND MAINTENACE AND MONITORING REPORT AREA OF CONTAMINATION 50 FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MASSACHUSETTS December 2019

The following U.S. Army responses pertain to the U.S. Environmental Protection Agency follow-on comments, dated 26 November 2019, on the *2018 Annual Operation and Maintenance (O&M) and Monitoring Report, Area of Contamination (AOC) 50* at the Former Fort Devens Army Installation, Devens, Massachusetts, dated April 2019.

General Comments

Comment #3: In general, EPA agrees that the remedies applied in AOC 50 have reduced PCE concentrations in many portions of the plume and have succeeded in segmenting the plume as illustrated by historical iso-concentration contour maps (Figures 4-2 through 4-4). However, the contours optimistically suggest definitive plume delineation in areas where the contaminant extent may still be unknown. Please revise the contours to acknowledge the uncertainty.

Army Response 10/30/19: The extents of the plume are sufficiently well established based on current and historic results below the PCE cleanup goal of 5 micrograms per liter (µg/L) such that the contours can be depicted with solid, rather than dashed lines. Recently, the results of the newly installed monitoring wells G6M-18-01 and G6M-18-02 have bound the plume to the west. The contours also are appropriately labeled as "interpretive".

EPA Response 11/26/2019: While EPA agrees with Army's response regarding new wells G6M-18-01 and G6M-18-02 helping to define the western boundary in that area, there remains a philosophical difference regarding solid and dashed contours in areas where there are no data points outside the contour line. Solid lines should not be used to delineate plume boundaries (i.e. extent of contamination) in areas with little or no supporting groundwater data. If Army would like to illustrate plume boundaries based on its "interpretation" of anything other than groundwater monitoring well data, then it should provide details related to this approach in a separate submittal to the Devens BCT for review and approval. In the interim, Army might consider illustrating its "interpretative" contaminant boundaries using a color-coded label other than that than currently used to define actual, monitoring well data supported/derived plume boundaries.

Army Response 12/6/19: Historical and current data was used to draw in plume concentration boundaries. The Army will consider using concentration color-gradients plumes in future reports.

Comment #6: The 2017 and 2018 injections used a combination of existing injection wells and direct push borings, as proposed in the "*Area of Contamination 50, 2018 Injection Plan Summary"*. This approach provides flexibility regarding injection locations and appears to have successfully reduced contaminant concentrations in some locations that have not been addressed previously. EPA believes that this approach should continue, with regulator consultation/concurrence regarding injection locations, depths, and other parameters.

Army Response 10/30/19: Comment noted. A combination of using both direct push, and existing injection wells will be considered during the planning of future injection event(s). The need for continued injections in AOC 50 Areas 1 through 5 will be evaluated based on the results from the semi-

annual groundwater monitoring program (e.g., contaminant concentration trends, redox conditions, residual TOC concentrations) and recommendations will be made in Annual Reports.

EPA Response 11/26/2019: EPA disagrees with Army's apparent decision to discontinue injections using a combination of existing injection wells and direct push borings especially given the success this approach has had in reducing contaminant concentrations in locations not previously addressed. Results presented in 2017 and 2018 semi-annual and annual groundwater monitoring reports provide sufficient evidence to support continued injections.

Army Response 12/06/2019: The Army did not indicate in the response that it would discontinue injections using a combination of existing injection well and direct push borings. Army's 10/30/2019 response indicates that after an injection event and evaluation of the performance of the remedy, injection locations/methods will need to be re-evaluated every year. This is standard practice and recommendations will be made.

Specific Comments

Comment #9: Page 4-2, Section 4.1.1, next-to-last paragraph – In the 2017 Annual Report, Army noted areas in the western portion of the plume near Areas 4 and 5 where "reducing conditions are not consistently present", but Army predicted that "reducing conditions will become more prevalent as the injected substrate migrates through the aquifer." In the 2018 Annual Report, Army noted the same phenomena, indicating that the prediction has not yet come true. How long should it take for the injected substrate to migrate through the aquifer such that reducing conditions are "more prevalent"? Is there some other plausible explanation for these areas of low DO and inconsistent reducing conditions (i.e. G6M-13-02X, G6M-13-01X, G6M-97-05B)? Army should continue to monitor these areas for an expanded, more in-depth evaluation of its predictions in the 2019 Annual Report.

Army Response 10/30/2019: After further review, monitoring well G6M-13-02X has been removed from this discussion as the samples there had a negative ORP and a DO less than 0.5 mg/L (i.e., reducing conditions). Additionally, although this section is discussing field parameter results, when looking at the methane concentration at this well (6.7 mg/L), the area is indicative of strongly reducing conditions. Further, the DO and ORP, as shown in Figure 4-1, are displaying a downward trend for monitoring well G6M-13-01X and indicate that upgradient injections are slowly having an impact on downgradient DO and ORP. It is suspected at G6M-97-05B is screened within a finer-grain matrix, with a lower hydraulic conductivity (and thus groundwater velocity) which is causing the delay in decreasing DO and ORP. This section has been re-written for accuracy, as follows:

"Within the western portion of the plume in Areas 4 and 5, the DO (less than 1 mg/L) and negative ORP are indicating that the aquifer is reducing. This may be the result of upgradient injections (previous, and/or current) which may be starting to impact the groundwater chemistry. The fall ORP at monitoring well G6M-13-01X was negative, which is the first time a negative ORP has been recorded at this well. This may indicate that upgradient injections are beginning to influence the groundwater chemistry in this area. The DO (greater than 1 mg/L) and ORP (positive value) at monitoring well G6M-97-05B indicate that this well has not been influenced by upgradient injections yet. Given, the suspected lower conductivity at this well (10^{-3} to 10^{-4}cm/sec), this well will need to be monitored overtime to determine any effects."

EPA Response 11/26/2019: The comment discusses wells in which expected reducing conditions have not yet been achieved. In Army's response, there is a discussion of G6M-97-05B, where decreasing

DO and ORP are "delayed." Army postulates that this may be due to the well being screened in a "finer-grain matrix". Please check the boring log for this well to see if Army's suspicion is supported by available site data. Future discussion is warranted to more fully understand/resolve this issue prior to Army's issuance of the Final 2018 Report. At the very least, Army should continue to track this issue in subsequent Annual LTM Reports.

Army Response 12/6/19: The boring log was reviewed and "silty clayey layers within a dense fine sand matrix" were described at the screen interval. Given that additional injections were performed in this Area in 2019, further evaluation on this well will be performed in the 2019 AR.

Comment #14: Page 5-1, Section 5.0, last ¶– Please provide a copy of the "September 2007 Addendum to the Real Property Master Plan."

Army Response 10/30/2019: A copy of the September 2007 Addendum to the Real Property Master Plan will be provided.

EPA Response 11/26/2019: Army's response states that the September 2017 Addendum to the Real Property Master Plan will be provided but there is no track change edit in Section 5.1 referring the reader to an Addendum or Appendix and EPA has yet to receive the requested document. Further discussion/resolution of this issue is requested prior to Army's issuance of the Final 2018 Report.

Army Response 12/6/2019: The Real Property Master Plan will be included in Appendix E.

U.S. ARMY RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE 2018 ANNUAL OPERATION AND MAINTENACE AND MONITORING REPORT AREA OF CONTAMINATION 50 FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MASSACHUSETTS

The following U.S. Army responses pertain to the U.S. Environmental Protection Agency follow-on comments, dated 28 January 2020, on the *Draft Final 2018 Annual Operation and Maintenance (O&M) and Monitoring Report, Area of Contamination (AOC) 50* at the Former Fort Devens Army Installation, Devens, Massachusetts, dated April 2019. Comment/response histories are reprinted here for reference.

General Comments

EPA General Comment (1/28/2020): The comments below pertain to Army's December 2019, draft final 2018 AOC 50 Annual Report and follow-on to EPA's November 26, 2019 comments on Army's October 31, 2019 responses to EPA's July 30, 2019 comments on the draft 2018 AOC 50 Annual Report. The comment numbers below correspond to those in EPA's original (July 30, 2019) comments. Comments not discussed below have been adequately addressed previously, although several involve commitments for future action or discussion in the next (2019) Annual Report. The discussion below does not include consideration of comments by the Mass DEP or Army's responses to DEP's comments. A few new comments, not noted previously, are provided at the end.

Army Response (3/16/2020): Comment noted. See responses below.

EPA General Comment #3 (7/30/2019): In general, EPA agrees that the remedies applied in AOC 50 have reduced PCE concentrations in many portions of the plume and have succeeded in segmenting the plume as illustrated by historical iso-concentration contour maps (Figures 4-2 through 4-4). However, the contours optimistically suggest definitive plume delineation in areas where the contaminant extent may still be unknown. Please revise the contours to acknowledge the uncertainty.

> **Army Response (10/30/2019):** The extents of the plume are sufficiently well established based on current and historic results below the PCE cleanup goal of 5 micrograms per liter (µg/L) such that the contours can be depicted with solid, rather than dashed lines. Recently, the results of the newly installed monitoring wells G6M-18-01 and G6M-18-02 have bound the plume to the west. The contours also are appropriately labeled as "interpretive".
>
> **EPA Follow-on Comment (11/26/2019):** While EPA agrees with Army's response regarding new wells G6M-18-01 and G6M-18-02 helping to define the western boundary in that area, there remains a philosophical difference regarding solid and dashed contours in areas where there are no data points outside the contour line. Solid lines should not be used to delineate plume boundaries (i.e. extent of contamination) in areas with little or no supporting groundwater data. If Army would like to illustrate plume boundaries based on its "interpretation" of anything other than groundwater monitoring well data, then it should provide details related to this approach in a separate submittal to the Devens BCT for review and approval. In the interim, Army might consider illustrating its "interpretative"

contaminant boundaries using a color-coded label other than that than currently used to define actual, monitoring well data supported/derived plume boundaries.

Army Follow-on Response (12/6/2019): Historical and current data was used to draw in plume concentration boundaries. The Army will consider using concentration color-gradients plumes in future reports.

EPA Follow-on Comment (1/28/2020): EPA agrees that non-detections for PCE in new wells G6M-18-01 and G6M-18-02 help to define the western plume boundary in that area, especially if the non-detect results are repeated in 2019. EPA reiterates that solid contour lines should not be used to delineate contaminant concentrations where there are not data available to support the illustration. Without such site-specific data, these areas are best labeled as "predicted" or "assumed".

Army Follow-on Response (3/16/2020): The Army agrees that solid contour lines should not be used where there are no data available; however, it is important to note that these plume boundaries take into account current data, and data from historical wells/temporary microwells that have been installed through the life-cycle of the project. These historical additional data points have been added to plume Figures 4-2, 4-3, 4-4, 4-5, and 4-6.

EPA Comment #6 (July 30, 2019): The 2017 and 2018 injections used a combination of existing injection wells and direct push borings, as proposed in the "*Area of Contamination 50, 2018 Injection Plan Summary"*. This approach provides flexibility regarding injection locations and appears to have successfully reduced contaminant concentrations in some locations that have not been addressed previously. EPA believes that this approach should continue, with regulator consultation/concurrence regarding injection locations, depths, and other parameters.

Army Response (10/30/2019): Comment noted. A combination of using both direct push, and existing injection wells will be considered during the planning of future injection event(s). The need for continued injections in AOC 50 Areas 1 through 5 will be evaluated based on the results from the semi-annual groundwater monitoring program (e.g., contaminant concentration trends, redox conditions, residual TOC concentrations) and recommendations will be made in Annual Reports.

EPA Follow-on Comment (11/26/2019): EPA disagrees with Army's apparent decision to discontinue injections using a combination of existing injection wells and direct push borings especially given the success this approach has had in reducing contaminant concentrations in locations not previously addressed. Results presented in 2017 and 2018 semi-annual and annual groundwater monitoring reports provide sufficient evidence to support continued injections.

Army Follow-on Response (12/06/2019): The Army did not indicate in the response that it would discontinue injections using a combination of existing injection well and direct push borings. Army's 10/30/2019 response indicates that after an injection event and evaluation of the performance of the remedy, injection locations/methods will need to be re-evaluated every year. This is standard practice and recommendations will be made.

EPA Follow-on Comment (1/28/2020): Injections in 2017 and 2018 used a combination of existing injection wells and direct push borings. Despite Army's non-committal response (October 2019), this approach has proven to be successful and should be continued at least for the 2019 injection event.

Army Follow-on Response (3/16/2020): The Army agrees that this approach is successful and was used in 2019. As the plume decreases, monitoring the geochemistry and COC concentrations in the spring 2020 will be necessary to further evaluate the effectiveness and sustainability of the last round of injections. If the spring 2020 data indicate the need for additional injections, then the Army will provide an injection design memorandum to the EPA.

Page-Specific Comments

EPA Comment #9: Page 4-2, Section 4.1.1, next-to-last paragraph (7/30/2019): In the 2017 Annual Report, Army noted areas in the western portion of the plume near Areas 4 and 5 where "reducing conditions are not consistently present", but Army predicted that "reducing conditions will become more prevalent as the injected substrate migrates through the aquifer." In the 2018 Annual Report, Army noted the same phenomena, indicating that the prediction has not yet come true. How long should it take for the injected substrate to migrate through the aquifer such that reducing conditions are "more prevalent"? Is there some other plausible explanation for these areas of low DO and inconsistent reducing conditions (i.e. G6M-13-02X, G6M-13-01X, G6M-97-05B)? Army should continue to monitor these areas for an expanded, more in-depth evaluation of its predictions in the 2019 Annual Report.

Army Response (10/30/2019): After further review, monitoring well G6M-13-02X has been removed from this discussion as the samples there had a negative ORP and a DO less than 0.5 mg/L (i.e., reducing conditions). Additionally, although this section is discussing field parameter results, when looking at the methane concentration at this well (6.7 mg/L), the area is indicative of strongly reducing conditions. Further, the DO and ORP, as shown in Figure 4-1, are displaying a downward trend for monitoring well G6M-13-01X and indicate that upgradient injections are slowly having an impact on downgradient DO and ORP. It is suspected at G6M-97-05B is screened within a finer-grain matrix, with a lower hydraulic conductivity (and thus groundwater velocity) which is causing the delay in decreasing DO and ORP. This section has been re-written for accuracy, as follows:

"Within the western portion of the plume in Areas 4 and 5, the DO (less than 1 mg/L) and negative ORP are indicating that the aquifer is reducing. This may be the result of upgradient injections (previous, and/or current) which may be starting to impact the groundwater chemistry. The fall ORP at monitoring well G6M-13-01X was negative, which is the first time a negative ORP has been recorded at this well. This may indicate that upgradient injections are beginning to influence the groundwater chemistry in this area. The DO (greater than 1 mg/L) and ORP (positive value) at monitoring well G6M-97-05B indicate that this well has not been influenced by upgradient injections yet. Given, the suspected lower conductivity at this well (10^{-3} to 10^{-4}cm/sec), this well will need to be monitored overtime to determine any effects."

EPA Follow-on Comment (11/26/2019): The comment discusses wells in which expected reducing conditions have not yet been achieved. In Army's response, there is a discussion of G6M-97-05B, where decreasing DO and ORP are "delayed." Army postulates that this may be due to the well being screened in a "finer-grain matrix". Please check the boring log for this well to see if Army's suspicion is supported by available site data. Future discussion is warranted to more fully understand/resolve this issue prior to Army's issuance of the Final 2018 Report. At the very least, Army should continue to track this issue in subsequent Annual LTM Reports.

Army Follow-on Response (12/6/2019): The boring log was reviewed and "silty clayey layers within a dense fine sand matrix" were described at the screen interval. Given that additional injections were performed in this Area in 2019, further evaluation on this well will be performed in the 2019 Annual Report.

EPA Follow-on Comment (1/28/2020): EPA's comment discusses wells in which expected reducing conditions have not yet been achieved. The comment and Army's response reference G6M-97-05B, where anticipated decreases in DO and ORP are delayed. EPA agrees with the revised text used by Army in Section 4.1.1, next-to-last paragraph. Please continue to track ORP in this well and discuss in the 2019 and future annual reports. Also, in Army's October 2019 response to this comment, Army suggests that the observed results may be due to the well being screened in a "finer-grain matrix." EPA agrees that this is a plausible theory. However, Army should review the boring log for the well to see if this is the case and include a discussion of this point in the 2019 report.

Army Follow-On Response (3/16/2020): Comment noted. The Army will evaluate the soil boring log and DO and ORP in the 2019 Annual Report.

EPA Comment #14 (7/30/2019): Page 5-1, Section 5.0, last ¶– Please provide a copy of the "September 2007 Addendum to the Real Property Master Plan."

Army Response (10/30/2019): A copy of the September 2007 Addendum to the Real Property Master Plan will be provided.

EPA Follow-on Comment (11/26/2019): Army's response states that the September 2017 Addendum to the Real Property Master Plan will be provided but there is no track change edit in Section 5.1 referring the reader to an Addendum or Appendix and EPA has yet to receive the requested document. Further discussion/resolution of this issue is requested prior to Army's issuance of the Final 2018 Report.

Army Follow-on Response (12/6/2019): The Real Property Master Plan will be included in Appendix E.

EPA Follow-on Comment (1/28/2020): In Section 5.0, last paragraph on page 5-1, Army refers to a September 2007 Addendum to the Real Property Master Plan, located in Appendix E. EPA acknowledges that the Addendum is present at the end of Appendix E, but the Plan itself is not present.

Please add the Plan to the Appendix or revise the text in Section 5.0 (last sentence). Also, EPA suggests changing the title of Appendix E, because other elements besides checklists are included in the Appendix.

Army Follow-on Response (3/16/2020): The Army revised the last sentence to indicate that the Addendum to the Real Property Master Plan is included in Appendix E. The Army updated the title of Appendix E on the cover page and in the table of contents.

Additional (New) EPA Comments (1/28/2020)

EPA Comment #1, Section 1.4 (1/28/2020): EPA requests that a third bullet be added to the first group of bullets, referencing the January 2019 sampling of the two new wells and providing the actual sampling dates. (Note that dates related to the new wells are a bit contradictory later in the text (see below), so adding this bullet in Section 1.4 would help mitigate confusion).

Army Response (3/16/2020): A third bullet has been added to clarify when the wells were sampled.

EPA Comment #3, Sections 3.1, 4.2 and 4.2.2 (1/28/2020): EPA recommends the addition of the dates for well installation and well development in the fourth bullet.

Army Response (3/16/2020): Additional bullets have been added to clarify the dates on installation and well development.

EPA Comment #3, Sections 3.1, 4.2 and 4.2.2 (1/28/2020): The first sentence states that two new monitoring wells (G6M-18-01 and G6M-18-02) were installed from January 8 through January 10, 2019. The first sentence of Section 4.2 suggests that these wells were installed in December 2018 and then the first sentence of Section 4.2.2 says that the wells were installed from December 10 through December 13, 2018. Please confirm and amend the dates, as necessary.

Army Response (3/16/2020): The text has been revised to the correct dates. The well construction log for G6M-18-01 has been updated (see attached). The well construction log for G6M-18-02 is accurate. A reference to Section 3.1 in Section 4.2.2 will be inserted into text.

EPA Comment #4, Section 4.2.3 (1/28/2020): The first sentence says that samples were collected from the new wells on January 14, 2019 but there is no discussion of when the wells were developed? Please make sure all dates regarding the new wells are correct and consistent.

Army Response (3/16/2020): The well development was described in Section 3.1. The date (January 10, 2019) has been added to the text in Section 3.1. The text has been updated for consistency.

EPA Comment #5, Figures 1-2, 2-1, 3-1, 3-2, 4-5, 4-6, 4-15, and 4-16 (1/28/2020): These figures have Legend entries for the new wells: "Newly installed monitoring well – 01/2019." Unless the figure shows sample results, it would be more accurate to say, "New monitoring well installed 12/2018." For figures that

show sample results (the Section 4 figures listed above), EPA suggests that the Legend should read, "New monitoring well sampled 01/2019," so the reader knows that the results obtained from the new wells are from samples collected on different days (in January 2019) from results shown for the other wells on the figures with concentration data (October 2018).

Army Response (3/16/2020): The monitoring wells were installed between January 8-9, 2019 and sampled on January 14, 2019. The text in the report will be revised to reflect this change. Therefore, figures with results (i.e., Figure 4-5, 4-6, 4-15, and 4-16) will be revised to indicate "Newly installed and sampled monitoring well – 01/2019".

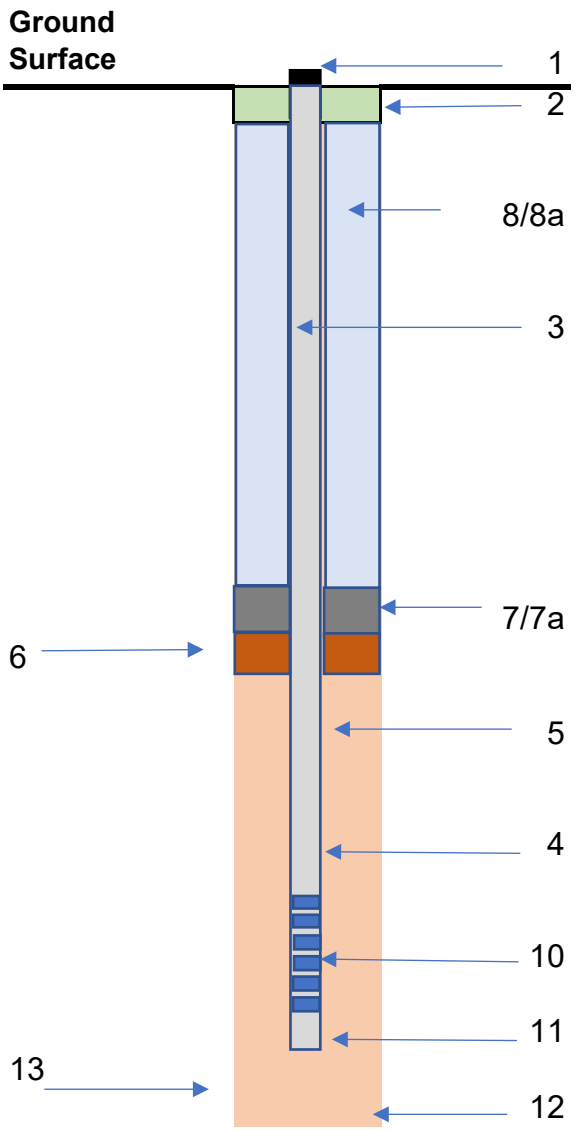
EPA Comment #6, Figure 4-9 (1/28/2020): This figure indicates, in its title, that the concentration data are from October 2018. The cross section shows new well G6M-18-02, but this well was drilled in December 2018 and sampled in January 2019. A note should be added, providing this information.

Army Response (3/16/2020): A note was added to the Figure stating that G6M-18-02 was installed and sampled in January 2019.

KGS	Project: Devens	Well Identification: G6M-18-01
	Project Number: 1082-0005-005	

WELL CONSTRUCTION DIAGRAM

Client: USACE	Location: AOC 50
Drilling Company: Cascade Drilling, LP.	
Drilling Method and Equipment: Truck-Mounted Full Sonic Drilling with 6" Core Barrel	
Drilling Date(s): January 9, 2019	Well Construction Date: January 9, 2019
Potable Water Used:Yes Source: SHL ATP	Drums of IDW: 1 Drum
KGS Field Personnel: Brett Anchukaitis	Associated Soil Boring Log: None
Ground Elevation (ft msl): ~ 266 ft (NVGD)	Top of PVC Elevation (ft msl): TBD



1. Well Protection Type: Steel Protective Flushmount
   Stickup: Flushmount, 4" Steel Cover
2. Concrete Pad Depth: 6-inch.
3. Diameter/Type of well casing: 2-inch/PVC Riser
4. Type/Screen Slot: PVC Screen/0.010-inch
5. Type of Screen Filter Sand: #1
   Quantity Used: 6- 50lb Bags
   Top/Bottom of Pack: 114/127 ft bgs
6. Type of Filter Sand: #1
   Quanity Used: na
   Top/Bottom of Pack:
7. Type of Seal: Bentonite
   7a.Top/Bottom of Seal: 111-114 ft bgs, 0-10 ft bgs
8. Grout Mixture Used: cement/bentonite mix
   8a. Placement Method: tremie pipe
   Top/Bottom of Grout: 10-110
9. Screen length: 10 feet
10. Screen interval: 116-126 ft bgs
11. Sump Length: 3-in. PVC cap
12. Bottom of Boring: 127 ft bgs
13. Diameter of borehole: 6 inches

Comments: No Bollards to be installed at G6M-18-01 near runway. Bentonite Chipped remaining 10-ft to ground surface, grout was being absorbed into overburden too much.

TBD - to be determined

na - not available

U.S. ARMY RESPONSES TO MASSACHUSETTS DEPARTMEMENT OF ENVIRONMENTAL PROTECTION COMMENTS ON THE 2018 ANNUAL OPERATION AND MAINTENACE AND MONITORING REPORT AREA OF CONTAMINATION 50 FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MASSACHUSETTS October 2019

The following U.S. Army responses pertain to the Massachusetts Department of Environmental Protection (MassDEP) comments, dated 14 June 2019, on the *2018 Annual Operation and Maintenance (O&M) and Monitoring Report, Area of Contamination (AOC) 50* at the Former Fort Devens Army Installation, Devens, Massachusetts, dated April 2019.

Comment 1 – Section 4.1.2, Fourth Bullet– The report suggests that rapid consumption of electron donors and/or lack of hydraulic connection could explain the persistence of PCE at concentrations above the MCL in samples collected from well G6M-04-02X. Sampling results suggest a third possibility: the PCE encountered at this location may have a local source (e.g., the nearby hangar), rather than resulting from residual contamination attributable to the AOC50 plume as delineated in 2004. There appears to be no remaining upgradient source within the core of the AOC 50 plume; PCE was not detected in Area 2 samples in 2018 and PCE has not been detected above the MCL in samples from well G6M-04-03X, located approximately 150 feet upgradient of G6M-04-02X, since 2015. The intervening area has been treated over the past 2 years, but concentrations in G6M-04-02X samples collected since 2008 appear to have stalled within a range that exceeds the MCL. Also, sampling from prior years (Figures 4-2, 4-3, and 4-4) indicates that PCE concentrations in Area 3 have been higher than concentrations in Area 2 since 2004. Further progress may require an investigation of the distribution of PCE in the immediate vicinity of well G6M-04-02X.

Response: The stratigraphy surrounding the area of G6M-04-02X may be less transmissive than the area surrounding G6M-04-03X which may also play a role in the lack of sustained reductions in this well. The contamination may be binding to these lesser permeable soils and diffusing into the groundwater. This "matrix diffusion" could explain the fluctuating concentrations. The 2019 injection program included injections in the area of G6M-04-02X. A summary of the 2019 injection program was provided to MassDEP and EPA on 2 July 2019. The performance monitoring data collected as part of the LTM program will be used to monitor the effectiveness of the revised injection strategy.

Comment 2 – **Section 4.1.2, Seventh Bullet** – While the increasing level of methane reported in the October 30, 2018 sample collected from well G6M-97-05B is an encouraging sign that recent injections have started to establish reducing conditions upgradient of the well the lack of other ERD indicators (increasing PCE concentrations (Figure 4-14), unchanged daughter product concentrations, background levels of arsenic, iron, and manganese; TOC =ND, ORP = +105) in the sample is surprising based on the close proximity (~30 feet) and lateral extent (>100 feet) of the August 2018 injections (Figure 4-5). Similar results in 2019 would suggest that an investigation of the local distribution of PCE is necessary to improve the effectiveness of treatment.

Response: The results from the October 2018 sampling event indicate that redox conditions in the vicinity of well G6M-97-05B are beginning to change toward the reducing conditions that are necessary for PCE degradation. However, since the redox conditions are not yet conducive for PCE degradation, future activities should focus on fostering an appropriate anaerobic

environment. The 2019 injection program is designed to maximize the zone of influence of the injection point network to better distribute amendments in the area around G6M-97-05B. Due to the suspected lower hydraulic conductivity in this area (10^{-3} to 10^{-4} cm/sec), the injection points are intended to be spaced closer to well G6M-97-05B in the upgradient area.

Comment 3 – Section 4.2.2 – Location coordinates and ground surface and riser casings elevations for new monitoring wells G6M-18-01 and G6M-18-02 should be surveyed prior to preparing the 2019 annual report.

Response: Monitoring wells G6M-18-01 and G6M-18-02 were surveyed on April 9, 2019. The results have been uploaded into the Fort Devens database. The screen elevation has been added to the text and updated in Table 4-1.

Comment 4 – Appendices A.1 and A.2 – The groundwater water level measurement sheets do not include all the water level measurements taken during the spring and fall monitoring events; the report should include compete copies of these field records.

Response: The missing measurements will be added to Appendices A.1 and A.2. Additionally, the cited date of the gauging for well G6M-02-12X (15 October 2018) has been corrected to 16 October 2018).