Q1 2023 Sampling Event Data Gap Monitoring Well No. WUABFFMW01

Kirtland Air Force Base Bulk Fuels Facility
Albuquerque, New Mexico

Prepared for:

Albuquerque Bernalillo County Water Utility Authority
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Acronyms and Abbreviations

°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	micrograms per liter
µS/cm	microSiemens per centimeter
AES	Advanced Environmental Solutions
ASTM	ASTM International
BFF	Bulk Fuels Facility
bgs	below ground surface
btoc	below top of casing
DEHP	bis(2-ethylhexyl) phthalate
DMPDB	dual membrane passive diffusion sampler (also abbreviated DMB or DMS)
DI	deionized water
DL	detection limit
EA	EA Engineering, Science, and Technology, Inc., PBC
EDB	1,2-dibromoethane, aka ethylene dibromide
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
Eurofins	Eurofins Lancaster Laboratories Environment Testing, LLC
ft	foot/feet
gal	gallon(s)
gpm	gallons per minute
INTERA	INTERA Incorporated
KAFB	Kirtland Air Force Base
LF	low-flow purge sampling method
LNAPL	light non-aqueous phase liquid
LOD	limit of detection
LOQ	limit of quantitation
LTM	long-term monitoring
NAVD88	North American Vertical Datum of 1988
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NTUs	nephelometric turbidity units
ORP	oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons
PDB	passive diffusion bag

QSM	*Department of Defense (DoD) Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories*
Site	Data Gap Well No. WUABFFMW01
SSHASP	Site-Specific Health and Safety Plan
SOP	Standard Operating Procedure
SVOCs	semi-volatile organic compounds
VOCs	volatile organic compounds
Water Authority	Albuquerque Bernalillo County Water Utility Authority
Work Plan/SAP	Work Plan and Sampling Analysis Plan

1 Introduction

INTERA Incorporated (INTERA), under contract with the Albuquerque Bernalillo County Water Utility Authority (Water Authority) and in accordance with the *Work Plan/Sampling Analysis Plan for Data Gap Monitoring Well Installation Well No. WUABFFMW01* (Work Plan/SAP) dated January 6, 2022 and revised March 2023, is submitting this *Q1 2023 Quarterly Groundwater Monitoring Report*. This report documents activities associated with the Quarter 1 (Q1) 2023 sampling event to determine the presence/absence of EDB and other fuel contaminants conducted in March 2023 at Water Authority Data Gap Monitoring Well No. WUABFFMW01 (WUABFFMW01), located at 800 Indiana Street SE, Albuquerque, New Mexico (Site).

1.1 Background

WUABFFMW01 was installed at the Site in 2022 to investigate the distal end of the ethylene dibromide (EDB) groundwater plume emanating from the Kirtland Air Force Base (KAFB) Bulk Fuels Facility (BFF) jet fuel leak. The KAFB BFF leak was reportedly discovered in 1999 and has subsequently been investigated and monitored by the United States Air Force and their contractors, including EA Engineering, Science, and Technology, Inc., PBC (EA) and others, via a network of monitoring wells within KAFB and in Albuquerque neighborhoods to the north of KAFB. Groundwater underlying KAFB is impacted with benzene, toluene, ethylbenzene, and xylenes (BTEX), EDB, and light non-aqueous phase liquid (LNAPL). The EDB groundwater plume extends more than 6,000 ft from the source north into the neighborhoods, and although interim measure extraction wells have been implemented, until the EDB plume is fully remediated it continues to pose a risk to Water Authority production wells. Thus, characterization of the distal end of the EDB plume by filling any data gaps in the monitoring well network is important to ensure that the network is sufficient to serve as an early warning system for downgradient Water Authority production wells.

Field construction activities for WUABFFMW01 were initiated on January 24, 2022 and were completed on April 14, 2022. The well is screened between 572 feet to 592 feet below ground surface (bgs) to monitor a potential deep contaminant migration pathway; for comparison, the depth to water at the time of completion was 453 feet bgs. Groundwater sampling of WUABFFMW01 began in May 2022 and has continued to present on a quarterly basis using one or both of these sampling methods each event:

1. passive sampling using passive diffusion bag (PDB) samplers for analysis of volatile organic compound (VOC) constituents and dual membrane passive diffusion (DMPDB) samplers for analysis of non-VOC constituents, and
2. low-flow purge sampling (LF) using a dedicated Bennett Pump to purge three saturated well-casing volumes at a flow rate low enough to avoid turbulent flow and minimize drawdown and then to collect samples for analysis of both VOC and non-VOC constituents.

Water levels are manually gauged using an oil/water interface probe during sampling events and certain other field activities at the well. A pressure transducer and data logger were installed in WUABFFMW01 in July 2022 to record hourly water levels between sampling events. The transducer is removed for three weeks each quarter while PDB and DMPDB samplers are deployed and during PDB or LF sampling. The

transducer is replaced following sample collection and reprogrammed to the current water level after the completion of sampling activities.

1.2 Scope of Work

The SAP portion of the Work Plan/SAP outlines the sampling procedures that INTERA followed for all groundwater monitoring activities at WUABFFMW01. The Work Plan/SAP includes a Site-Specific Health and Safety Plan (SSHASP) as an attachment. The scope of work for the groundwater sampling for the presence/absence of EDB and other fuel contaminants event conducted in Q1 2023 reported herein included the following tasks:

- Notify the Water Authority of sampling schedule and coordinate with EA and/or Air Force representatives upon split-sample request.
- Measure fluid levels at WUABFFMW01 using a properly decontaminated oil/water interface probe, download transducer data before sampling, and program and redeploy transducer after sampling.
- Perform passive and LF purge sampling while measuring groundwater quality field parameters (temperature, specific conductivity, pH, oxidation-reduction potential [ORP], and turbidity) and monitoring field parameters during purging for stabilization using a calibrated YSI Pro Plus water quality meter and a turbidity meter. Collect groundwater samples at WUABFFMW01 and submit samples for the following laboratory analyses:
  - Ethylene dibromide (EDB) via EPA Method 8011
  - Volatile Organic Compounds (VOCs) via EPA Method 8260
  - Semi-Volatile Organic Compounds (SVOCs) via EPA Method 8270
  - Metals via EPA Method 6010
  - Anions via EPA Method E300.0
  - Alkalinity via Standard Method SM2320B
- Decontaminate all reusable sampling equipment using Liquinox® (or equivalent) soap and rinse twice with deionized (DI) water. This includes decontamination of the Bennett pump and tubing onsite prior to use for sampling and using lab-grade ASTM Type II reagent water (a high-purity specification for DI water) for the final rinse before sampling.
- Collect QA/QC samples including an equipment rinsate sample from the final decontamination rinse and a field blank during collection of the groundwater sample for VOCs. Submit QA/QC samples for laboratory analysis of VOCs.
- Transport purge water off-Site for disposal at the Advanced Environmental Solutions (AES) facility in Belen, New Mexico.

The WUABFFMW01 Q1 2023 sampling event was the first event that incorporated certain methodology changes in the sampling approach as envisioned in the March 2023 SAP revisions. In addition to several minor clarifications to procedures, the more significant revisions included formalizing inclusion of both

passive and LF samples during each quarterly event, formalizing the additions of equipment rinsate and field blank samples to the scope, and contracting directly with and submitting samples directly to Eurofins Lancaster Laboratories Environment Testing, LLC (Eurofins), 2425 New Holland Pike, Lancaster, Pennsylvania (Environmental Laboratory Accreditation Program [ELAP] Certificate No. 36-00037, State of Pennsylvania).

The new contract with Eurofins specified reporting analytical results according to *Department of Defense (DoD) Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories*, version 5.4, dated 2021. Use of the QSM protocol is intended to provide maximum comparability with results from the KAFB monitoring program. The laboratory quantitation and detection limits under the QSM protocol differ somewhat from the default Eurofins protocol under which results were reported for previous quarterly monitoring events. The QSM limits include, from highest to lowest, a limit of quantitation (LOQ), and limit of detection (LOD), and a detection limit (DL). The LOQ is essentially equivalent to the default protocol's reporting limit, and the DL is essentially equivalent to the default protocol's method detection limit. The difference is that under the QSM protocol, non-detections are reported as being less than the LOD as opposed to a method detection limit. Detected concentrations below the LOQ that are greater than or equal to the DL are reported as estimated quantities, the same as with the default protocol.

1.3 Work Plan Deviations

The following work plan/SAP deviations this quarter are noted below:

- Following discussion and mutual agreement by the Water Authority and INTERA, two additional equipment rinsate samples were collected following maintenance on the Bennett pump and tubing bundle in March 2023 before the Q1 field event. One rinsate sample was collected using lab-grade DI water poured over the tubing bundle exterior on March 29, 2023 after over-taping the tubing bundle with self-fusing silicone tape; the sample was to ensure the new tape was clean. The second sample was collected using lab-grade DI water poured over the Bennett pump to ensure the pump was clean since it had just been returned from the manufacturer following maintenance and cleaning by the manufacturer. Last, the routine equipment rinsate sample was collected from the lab-grade DI water circulated through the pump and tubing for the final decontamination rinse. All rinsate samples were submitted to Eurofins for analysis of VOCs.
- Eurofins reported dissolved metals by EPA Method 6020 and nitrate and nitrite by EPA Method 353.2. In INTERA's experience, these methods are comparable to EPA Methods 6010 and 300.0, respectively, i.e., differences are typically small and random.

2 Field Activities

Field activities for this groundwater sampling event at WUABFFMW01 were conducted on March 10 and 31, 2023. A copy of the field notes and groundwater sampling forms are included in **Appendix A**. The SSHASP was reviewed in detail and used as a guide for daily health and safety meetings. All field activities were performed in accordance with the procedures stated in the Water Authority-approved Work Plan/SAP.

2.1 Fluid Level Monitoring

A dedicated pressure transducer (In-Situ Level TROLL 700, 300 psi, with vented, twist-lock cable) was installed on December 14, 2022 in WUABFFMW01 following the Q4 2022 sampling event and set to record water levels hourly. INTERA downloaded the data from the transducer prior to PDB/DMPDB deployment on March 10, 2023 and will transfer the electronic file to the Water Authority via email.

Depth to groundwater was gauged on March 10, 2023 prior to PDB/DMPDB deployment and again on March 31, 2023 prior to the LF purge sampling event. LNAPL was not anticipated to be present in WUABFFMW01, and an electronic oil-water interface probe was used to confirm it was not present at the water surface prior to the sampling event. Upon retraction, the well gauging tape was thoroughly decontaminated per the Work Plan/SAP. Fluid level measurements were recorded in the field forms and notes included in **Appendix A**.

The pressure transducer was reset following LF purge sampling on March 31, 2023.

2.2 Groundwater Sampling

INTERA collected passive and LF groundwater samples from WUABFFMW01 on March 31, 2023. Sampling methods are discussed in further detail in Sections 2.2.1 and 2.2.2. All purge, water quality, and sample collection data were recorded on a field form, a copy of which is provided in **Appendix A**. The samples were submitted to Eurofins Lancaster Laboratories Environment Testing, LLC (Eurofins), 2425 New Holland Pike, Lancaster, Pennsylvania (Environmental Laboratory Accreditation Program [ELAP] Certificate No. 36-00037, State of Pennsylvania) for the analyses listed in Section 1.2. The laboratory report is included in **Appendix B**. Purge water was containerized in a 275-gallon tote and transported by INTERA to the AES facility in Belen, New Mexico for disposal. A copy of the waste manifest is provided in **Appendix C**.

2.2.1 Passive Diffusion Bag and Dual Membrane Passive Diffusion Sampling

PDBs, DMPDBs, and accessories were ordered from Eon Products prior to the sampling event. The tethered line of PDB and DMPDB samplers were deployed on March 10, 2023. The samplers were set in the screened interval from approximately 572 to 592 ft bgs and left in the well for 3 weeks. The depths of the tops of each sampler and the specific laboratory analyses performed with water from each sampler are listed on the form in **Appendix A**. The PDB and DMPDB samplers were retrieved on March

31, 2023, samples were collected for the Water Authority and split with EA, and groundwater quality field parameters were measured using a YSI Pro Plus water quality meter and a Hach 2100Q turbidity meter. EDB and VOCs samples for the Water Authority were collected from the PDB sampler that had been placed with the top at 586 ft below top of casing (btoc). Per EA's request, their split sample was obtained from the DMPDB sampler with the top at 583 ft btoc. The Water Authority samples for all other analytes were from the shallower DMPDB samplers.

2.2.2 Low-Flow Purge Bennett Pump Sampling

WUABFFMW01 was sampled using the LF purge method on March 31, 2023 following passive sampling and decontamination of the Bennett pump and tubing. During the event, the Bennett pump was placed in the center of the well screen, and the flow rate was maintained at 1 gallon per minute (gpm) or less, with an average of about 0.82 gpm. This flow rate was still sufficiently low to maintain laminar flow in a 3-inch well (the flow rate was higher than for previous sampling events which maintained flow rates of approximately 0.13 gpm).

During purging, groundwater quality field parameters (temperature, specific conductivity, pH, ORP, and turbidity) were monitored for stabilization using a YSI Pro Plus water quality meter and a Hach 2100Q turbidity meter. Purging was considered complete when WUABFFMW01 had been purged a minimum of three saturated well-casing volumes and the field parameters had stabilized. Stability was defined as a minimum of three consecutive measurements within 10 percent (%) of each other for temperature and specific conductivity, within 0.5 standard units for pH, within 10 millivolts (mV) for ORP, and either below 10 nephelometric turbidity units (NTUs) or within 10% of each other for turbidity.

After a total of 175 gallons had been purged (field parameters stabilized and purging continued slightly beyond the minimum three casing volumes), the LF sample was collected from WUABFFMW01 and split with EA.

2.3 QA/QC Samples

QA/QC samples were collected prior to and during the sampling event using the same VOCs containers and preservatives as for the primary samples and submitted to Eurofins for analysis of VOCs by EPA Method 8260. The QA/QC samples were filled using ASTM Type II reagent water (lab-grade DI water).

On March 29, 2023, an equipment rinsate (blank) sample designated EQPT-PUMP_20230329 was collected from lab-grade DI water poured over the Bennett pump, to ensure the pump was clean. The Bennett pump was shipped to Bennett, Inc. for maintenance and a deep cleaning, and the equipment rinsate was collected upon return to determine if the manufacturer cleaning was effective and to ensure that no VOC cross-contamination had occurred during shipping and handling.

On March 31, 2023, two additional equipment rinsate (blank) samples were collected before lowering the Bennett pump downhole for purging and LF groundwater sample collection. An equipment rinsate designated EQPT-TAPE_03312023 was collected from lab-grade DI water poured over the tubing bundle to ensure the exterior surface was clean following maintenance to over-tape the tubing bundle with

self-fusing silicone tape. Next, the Bennett pump and tubing were decontaminated by placing the pump in a PVC decontamination vessel and circulating Liquinox and water through the tubing for one cycle, DI water only for a first rinse, and lab-grade DI water for the final rinse. An equipment rinsate designated EQPT-BLANK_03312023 was collected from the final rinse.

A field blank designated FIELD-BLANK_03312023 was collected by filling sample vials with lab-grade DI water and leaving them open to the atmosphere during collection of the primary groundwater sample.

Laboratory reports are included in **Appendix B**.

3 Results and Discussion

This section presents the results of the Q1 2023 quarterly groundwater sampling event at WUABFFMW01 conducted on March 10 and March 31, 2023. **Figure 1** presents water levels collected through the current quarter. **Table 1**, **Table 2**, and **Table 3** summarize water quality data from field measurements and laboratory analyses of groundwater and QA/QC samples. A copy of the field notes and groundwater sampling forms are included in **Appendix A**. The complete laboratory report is included in **Appendix B.**

3.1 Fluid Level Monitoring

Depth to groundwater was measured on March 10, 2023 before deploying the PDB/DMPDB samplers and was 451.97 ft btoc, equal to an elevation of 4,876.57 ft on the North American Vertical Datum of 1988 (NAVD88). A groundwater level measurement was also collected on March 31, 2023, prior to the Bennett pump sampling event, and depth to groundwater was 451.51 ft btoc, equal to an elevation of 4,877.03 ft NAVD88. LNAPL of measurable thickness (greater than 0.01 ft) was not observed.

Figure 1 presents water levels collected with the transducer as well as manual measurements through Q1 2023. Diurnal and seasonal variations are evident, as well as a slight upward trend over the first four quarters of monitoring. Groundwater elevations increased from October 2022 through March 2023 and ended at a higher elevation than measured during Q4 2022.

3.2 Field Parameters and Laboratory Analytical Results

Groundwater quality parameters (temperature, conductivity, pH, ORP, and turbidity) recorded from the PDB/DMPDB samplers and during well purging on March 31, 2023 are provided in the groundwater sampling forms in **Appendix A**, and stabilized/final groundwater quality parameters are summarized in **Table 1**. Results of laboratory analyses of the passive and LF groundwater samples collected March 31, 2023 are summarized in **Table 2**, QA/QC sample results are summarized in **Table 3**, and the complete laboratory report is included in **Appendix B**.

EDB and BTEX compounds were not detected in the passive or LF purge groundwater samples or the QA/QC samples above their respective detection limits (DLs).

The LF purge groundwater sample analyzed by EPA Method 8260D did not detect any VOCs. The passive groundwater sample identified low, estimated concentrations of 1,2,4-trichlorobenzene (0.31J µg/L) and acetone (2.4J µg/L), which are not likely representative of the aquifer environment. The "J" qualifier on each of these results indicates that the concentration identified is estimated (the result is less than the Limit of Quantitation [LOQ] but greater than or equal to the detection limit [DL] used by the laboratory). Analytical uncertainty and the role of random error increase at levels below the LOQ.

The low 1,2,4-trichlorobenzene concentration estimated in the passive sample is not corroborated by the LF purge sample result nor any previous sample results from WUABFFMW01, and the compound is not known to be associated with the KAFB BFF release (e.g., it was not detected in any of the 184

groundwater results from the KAFB BFF monitoring well network in Q4 2021, one of the larger recent sampling events) nor associated with any common sampling materials. Known uses of 1,2,4-trichlorobenzene are as an intermediate in chemical manufacturing, as an insecticide, and various industrial uses. If not consistently detected in future monitoring events, the 1,2,4-trichlorobenzene detection is likely due to laboratory contamination.

The low acetone concentration estimated in the passive sample was likewise not corroborated by the LF purge sample result, but comparable levels of acetone were reported for the field blank (1.4J µg/L) and equipment rinsate samples (0.91J to 1.6J µg/L). Acetone is a common laboratory contaminant and is also a common solvent in numerous consumer products and other products that may be present in an urban environment. Given the concentrations of acetone detected in the QA/QC samples, the detection reported for the passive groundwater sample is likely due to acetone in the ambient air during sampling and/or laboratory contamination.

Acetone and chloroform were the only compounds detected in any of the QA/QC samples collected for this event (**Table 3**). Chloroform is a common disinfection byproduct of water treatment. Detections of chloroform in some of the equipment blanks are likely attributable to the lab-grade DI water used for QA/QC samples or from laboratory contamination. Chloroform was not detected in either of the passive (PDB) or LF purge groundwater samples and therefore did not affect the primary sample results.

The only SVOC detections in groundwater samples analyzed by EPA Method 8270E were low, estimated concentrations of bis(2-ethylhexyl) phthalate (DEHP) (2.9J µg/L) in the passive (DMPDB) sample and naphthalene (0.10JM µg/L) in the LF purge sample, which are not likely representative of the aquifer environment. The “J” qualifiers indicate estimated results below the LOQs, and the “M” qualifier indicates that the result was manually integrated by the chemist to correct a questionable automatic integration by the laboratory instrument software. DEHP is a common laboratory and field contaminant associated with plasticizers; the low estimated concentration is not considered significant relative to the LOD or DL for the sample and associated laboratory method blank (**Appendix B**). Naphthalene occurs in petroleum products including those associated with the KAFB BFF release; however, the low naphthalene concentration reported for the LF purge sample (at a level equal to the DL) is not corroborated by the passive sample result nor any previous sample results from WUABFFMW01, and naphthalene would not be expected to migrate downgradient of the known groundwater BTEX plumes from the BFF. If not consistently detected in future monitoring events, the naphthalene detection is likely due to laboratory contamination.

Anions and metals or other cations detected above MDLs in the passive of LF purge groundwater samples included chloride, sulfate, total alkalinity, total arsenic, calcium, magnesium, potassium, sodium, dissolved iron, and dissolved manganese and are presented in **Table 2**.

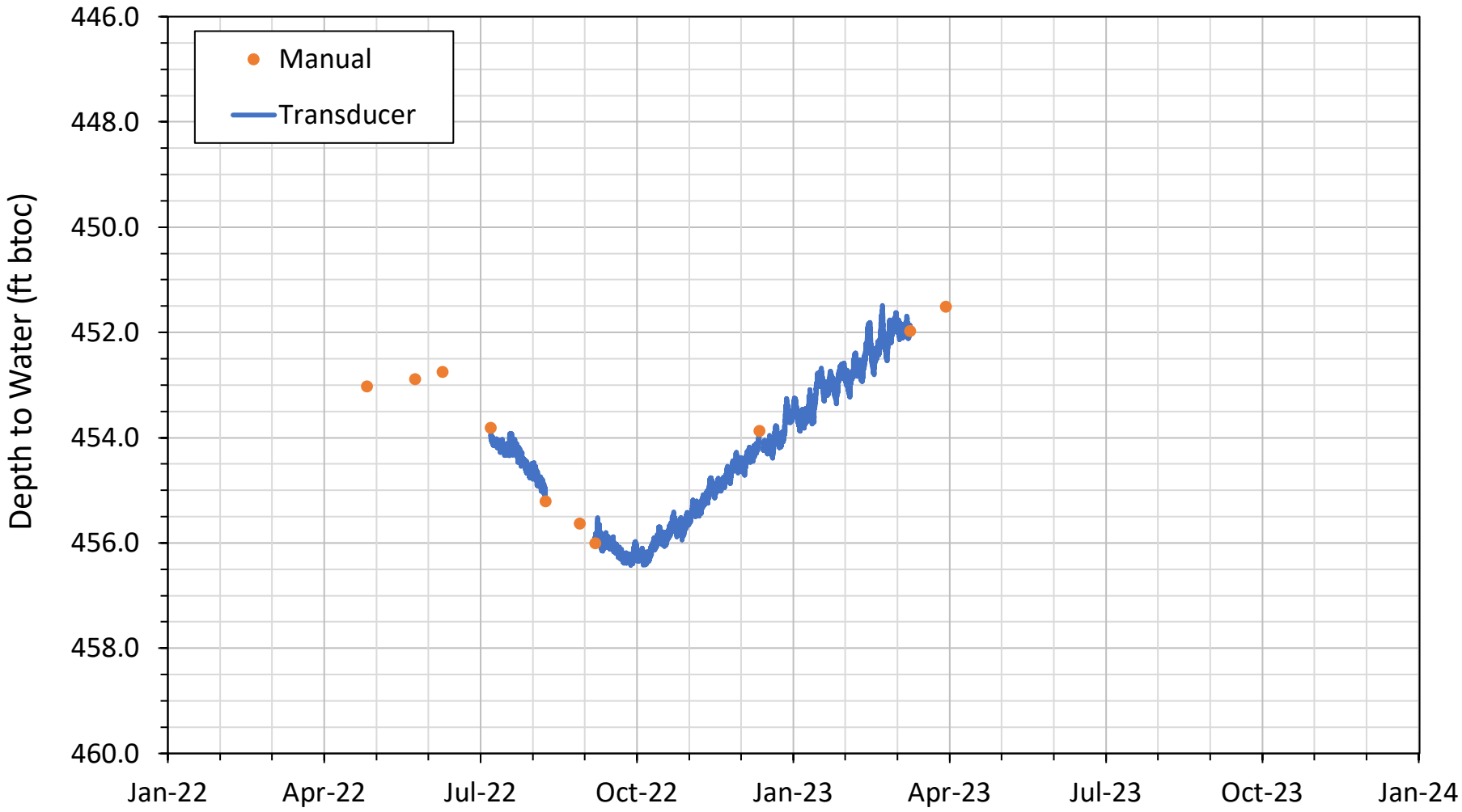
4 Summary and Recommendations

The contaminant of greatest concern, 1,2-dibromoethane (EDB), has not been detected in samples collected from WUABFFMW01 to date. The groundwater sample collected during the Q1 2023 sampling event did not detect any BTEX compounds. Detections of other organic compounds during this event are not considered representative of the aquifer environment for reasons explained in Section 3.2. Several inorganic analytes were detected; none of the inorganic concentrations identified were unusual.

The laboratory analytical results were compared to their respective screening levels used by KAFB for the BFF site, which are based on EPA and New Mexico Water Quality Control Commission (NMWQCC) standards, and no exceedances were identified.

INTERA recommends continued sampling of WUABFFMW01 for EDB and other fuel contaminants on a quarterly basis. This recommendation aligns with the sampling frequency followed by the Air Force, thus allowing for consistent and reliable data comparison across the BFF groundwater monitoring well network, thus allowing for consistent and reliable data comparison across the BFF groundwater monitoring well network.

Figures



Notes:
ft btoc = feet below top of casing
Added 0.99 ft to transducer depths to water from 7/8/22 to 8/9/22 to correct raw dataset that began recording before transducer had fully equilibrated.

Figure 1
Depth to Water, Data Gap Well WUABBFMW01
2023 Q1 Quarterly Monitoring Report
Albuquerque Bernalillo County Water Utility Authority

S:\ABQ\ABWUA.C009.KAFB\Data_Gap_Well\Task 10 LTGWM\DTW_plots.xlsx

Tables

TABLE 1
Groundwater Quality Field Parameters

Quarterly Groundwater Monitoring Report for Data Gap Well WUABFFMW01
ABCWUA
Kirtland Air Force Base Bulk Fuels Facility
Albuquerque, New Mexico

Well ID	Date	Temperature		Specific Conductivity (µS/cm)	pH	ORP (mV)	Turbidity (NTU)
		°C	°F				
WUABFFMW01	3/31/2023*	14.3	57.7	301.5	7.52	191.70	2.52
WUABFFMW01	3/31/2023**	19.0	66.2	242.3	7.86	-141.20	0.38

Notes:

*Passive Diffusion Bag Sampling Event

**Bennett Pump Low-Flow Purge Sampling Event
°C = degrees Celsius.

°F = degrees Fahrenheit.

µS/cm = microSiemens per centimeter.

mV = millivolts.

NTU = Nephelometric Turbidity Unit.

ORP = Oxidation-Reduction Potential

TABLE 2
Laboratory Analytical Results - Groundwater
Quarterly Groundwater Monitoring Report for Data Gap Well WUABFFMW01
ABCWUA
Kirtland Air Force Base Bulk Fuels Facility
Albuquerque, New Mexico

Sample ID	Date	Organics[1,2,3,4]											Inorganics[5,6,7]								Dissolved Metals[7]	
		1,2-Dibromoethane (EDB)[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Total Xylenes[2]	BTEX[3]	1,2,4-Trichlorobenzene[2]	Acetone[2]	Chloroform[2]	Bis(2-ethylhexyl) phthalate (DEHP)[4]	Naphthalene[4]	Chloride[5]	Sulfate[5]	Total Alkalinity[5]	Arsenic[6]	Calcium[7]	Magnesium[7]	Potassium[7]	Sodium[7]	Iron[7]	Manganese[7]
Units		µg/L											mg/L									
EPA MCL		**0.05**	**5**	**1000**	**700**	**10,000**	**NS**	**70**	**NS**	**70**	**6**	**30**	**NS**	**NS**	**NS**	**0.010**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
EPA RSL		**0.075**	**4.6**	**1100**	**15**	**190**	**NS**	**1.2**	**14000**	**0.22**	**5.6**	**12**	**NS**	**NS**	**NS**	**0.000052**	**NS**	**NS**	**NS**	**NS**	**14**	**0.43**
NMWQCC Standard		**0.05**	**5**	**1000**	**700**	**620**	**NS**	**70**	**NS**	**100**	**NS**	**30**	**250**	**600**	**NS**	**0.010**	**NS**	**NS**	**NS**	**NS**	**1.0**	**0.2**
KAFB BFF PSL		**0.05**	**5**	**1000**	**700**	**620**	**NS**	**70**	**14000**	**70**	**6**	**30**	**250**	**600**	**NS**	**0.010**	**NS**	**NS**	**NS**	**NS**	**1.0**	**0.2**
WUABFFMW01	3/31/2023*	<0.019	<0.60	<0.50	<0.80	<0.80	<2.7	0.31 J	2.4 J	<0.60	2.9 J	<0.21 M	9.2 D M	31 D	110	0.0014 J	33	4.5	2.7	24	0.190 J	0.094
	3/31/2023**	<0.019	<0.60	<0.50	<0.80	<0.80	<2.7	<1.0	<2.0	<0.60	<4.0	0.10 J M	8.9 D	28	110	0.00098 J	32	4.5	2.9	26	0.160 J	0.190

Notes:

Bolding indicates values or RLs in excess of KAFB BFF PSLs = more stringent of EPA MCL or NMWQCC Standard, or EPA RSL if analyte has no MCL or NMWQCC Standard.

NS = No standard/screening level.

Selected analytes listed include EDB, BTEX compounds, and analytes detected in at least one environmental sample or QA/QC sample this quarter. See laboratory report for all non-detected analytes.

[1] = EDB analyzed by U.S. Environmental Protection Agency (EPA) Method 8011

[2] = Volatile organic compounds analyzed by EPA Method 8260D

[3] = BTEX includes sum of benzene, toluene, ethylbenzene, and total xylenes detections (non-detections < limit of detection [LOD] are assumed to be 0) or sum of LODs when no individual analytes are detected

[4] = Semivolatile organic compounds analyzed by EPA Method 8270E

[5] = Nitrate and nitrite analyzed by EPA Method 353.2, other anions analyzed by EPA Method 300.0, and alkalinity analyzed by Standard Method 2320B

[6] = Arsenic and lead analyzed by EPA Method 6020A.

[7] = Cations/dissolved metals analyzed by EPA Method 6010C.

*Passive Diffusion Bag Sampling Event.

**Bennett Pump Low-Flow Purge Sampling Event.

µg/L = microgram(s) per liter.

mg/L= milligram(s) per liter.

D - Reported value is from a dilution.

J - Result is less than the Limit of Quantitation (LOQ) but greater than or equal to the detection limit (DL) and the concentration is an approximate value.

M - Manually integrated result.

BTEX = benzene, toluene, ethylbenzene, and total xylenes.

EDB = 1,2-dibromoethane, also known as ethylene dibromide.

EPA MCL = maximum contaminant level as defined by the EPA.

EPA RSL = regional screening level as defined by the EPA.

NMWQCC Standard = Groundwater Standards as defined by the State of New Mexico Water Quality Control Commission (NMWQCC, December 2018).

KAFB BFF PSL = Kirtland Air Force Base Bulk Fuel Facility Project Screening Level.

TABLE 3
Laboratory Analytical Results - QA/QC Samples
Quarterly Groundwater Monitoring Report for Data Gap Well WUABFFMW01
ABCWUA
Kirtland Air Force Base Bulk Fuels Facility
Albuquerque, New Mexico

Sample ID	Date	Organics							
		1,2-Dibromoethane (EDB)	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-Trichlorobenzene	Acetone	Chloroform
		Concentration (µg/L)							
EQPT-PUMP_20230329	03/29/2023	<0.50	<0.60	<0.50	<0.80	<0.80	<1.0	0.91 J	0.31 J
EQPT-TAPE_03312023	03/31/2023	<0.50	<0.60	<0.50	<0.80	<0.80	<1.0	1.6 J	<0.60
EQPT-BLANK_03312023	03/31/2023	<0.50	<0.60	<0.50	<0.80	<0.80	<1.0	<2.0	0.44 J
FIELD-BLANK_03312023	03/31/2023	<0.50	<0.60	<0.50	<0.80	<0.80	<1.0	1.4 J	<0.60

Notes:

Selected analytes listed include EDB, BTEX compounds, and volatile organic compounds detected in at least one environmental sample or QA/QC sample this quarter. See laboratory reports for all non-detected analytes.

Analyzed by EPA Method 8260D.

µg/L = microgram(s) per liter

J - Result is less than the Limit of Quantitation (LOQ) but greater than or equal to the detection limit (DL) and the concentration is an approximate value.

Appendix A

Field Notes and Groundwater Sampling Form

INTERA Passive Diffusion Water Sampling Data Sheet

Well Location ID: WUABFFMW01

DEPLOYMENT RECORD

Sample ID	WUABFFMW01		
Deployment Team	B. Archuleta & L. Price		
Date/Time Deployed	Date: MM/DD/YYY: 3/10/23	Time:	1230
Water Level Meter	Heron Interface Probe		

Well Stats (feet below top of casing [ft btoc])	
Well Total Depth[1]	597
Top of Screen	572
Bottom of Screen	592
Depth to Water	451.97
Notes	—

[1]Total Depth is based on construction data, not measured in field

Sampler Number	Top of Sampler Depth (ft btoc)
1*	**574**
2*	**577**
3*	**580**
4*	**583**
5**	**586**

*Dual Membrane Bag; ** Passive Diffusive Bag

Lynda Price — Signed

3/10/23 — Date

SAMPLING RECORD

Sample ID	WUABFFMW01_03312023_PDB		
Sampling Team	L. Price, F. Roecker, A. Hafner		
Date/Time Sampled	Date: MM/DD/YYY: 03/31/2023	Time:	0902
Water Level Meter			
Water Quality Meter	YSI Pro Plus (Rental-19G101339)		

Water Quality Readings

Time	Temp (°C)	pH	SP. COND. (mS/cm)	ORP (mV)	TURB. (NTU)*	Comments (color/odor)
0920	14.3	7.52	301.5	191.7	2.5[2]	Clear. No odor.

EA used this bag for their split

Groundwater Analyses

Analytes/Method	1	2	3	4	5	Notes
VOCs EPA Method 8260.	☐	☐	☐	☐	☒	
SVOCs via EPA Method 8270.	☐	☐	☒	☐	☐	
Total Metals (As, Pb, Ca, Mg, K, Na) via EPA Method 6010/6020.	☒	☐	☐	☐	☐	
Dissolved Metals (Fe, Mn) via EPA 6010	☒	☐	☐	☐	☐	
Anions (Cl, Br, SO4) via EPA Method E300.0.	☐	☐	☒	☐	☐	
Nitrate/Nitrite nitrogen via EPA 353.2	☐	☒	☐	☐	☐	
EDB via EPA Method 8011.	☐	☐	☐	☐	☒	
Alkalinity via EPA Method SM2320B.	☐	☒	☐	☐	☐	

Lynda Price
Signed

3/31/23
Date

PROJECT NAME: _DATA GAP WELL_ WELL NO.: __WUABFFMW01__
PROJECT NO.: ABWUA.C009.KAFB___ DATE: 3/31/2023 FIELD CREW A. Hafner, F. Roecker, B. Archuleta, L. Arice

WATER LEVEL, WATER COLUMN HEIGHT, PUMP DETAILS

TIME	DEPTH TO BOTTOM OF WELL (ft btoc)*	DEPTH TO WATER (DTW) (ft btoc)	SCREENED INTERVAL (ft btoc)	Water Column Height (DTB-DTW) (ft)	PUMP TYPE	PUMP DEPTH (ft btoc)
0938	597	451.51	572-592	145.49	BENNETT	~ 582

ft btoc: feet below top of casing from designated measuring point; *Total Depth is based on construction data, not measured in field

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
3"	0.38	55.29		165.86

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1

1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: Bennett Pump @ ~105 psi
METHOD OF SAMPLING: Bennett Pump

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
YSI Pro Plus	19G101339	0810	AH	Rental
HACH 2100 Q	13020C023547	0810	AH	Turb.
Geotech OWI		–	–	Black reel

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	ORP (mV)	TURB. (NTU)*	Water Level (ft bTOC)	Flow Rate (gal/min)	Total Volume Purged (gal)	Comments (color/odor)
1149	Generator on					451.51			
1153	Water @ surface, pumping; bucket test								
1155	17.4	7.64	244.5	-15.3					
1200	Connection on YSI flow-through cell leaking, replaced w/ wider diam. tubing								
1206	Resume pumping								
1208	18.1	7.76	244.5	-69.0	1.20	451.58	0.8	~10	colorless, colorless
1220	18.6	7.81	244.0	-118.5	0.91	451.76	0.8	20	" "
1235	18.6	7.84	243.2	-129.3	0.91	451.78	0.8	AH ~~0000~~22	" "
1250	18.7	7.84	242.9	-131.8	0.94	451.79	0.8		
1300	18.7	7.85	243.2	-133.4	0.87	451.78	0.8	~~60~~ 84	adjusted based
1315	18.8	7.85	243.6	-136.2	0.90	451.80	0.8	60	on tote marks.
1330	18.8	7.85	243.4	-136.9	0.78	451.79	0.8	72	
1345	18.8	7.85	242.8	-137.7	0.64	451.78	0.8	85	
1400	18.8	7.85	244.2	-139.0	0.64	451.78	0.8	100	

WATER QUALITY READINGS DURING PURGING (continued) 165186

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	ORP (mV)	TURB. (NTU)*	Water Level (ft bTOC)	Flow Rate (gal/min)	Total Volume Purged (gal)	Comments (color/odor)
1415	18.9	7.86	244.0	-139.2	0.59	451.74	0.8	1120 AH	
1430	18.9	7.86	243.7	-139.5	0.42	451.81	0.8	124	colorless, odorless
1445	18.9	7.85	243.7	-139.8	0.39	451.82	0.8	136	" "
1500	19.0	7.86	243.5	-140.0	0.52	451.75	0.8	148	" "
1515	19.1	7.86	243.4	-141.3	0.41	451.78	0.8	160	Tightened up connection at moisture trap filter. Able to increase pressure 5-10 psi: 110psi → 125psi
1530	19.0	7.86	242.3	-141.2	0.38	451.79	1.0	175 →	

*If measured.
Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10% (when greater than 10NTUs) ORP. ±10mV

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: WLIABFFMW01_083120B_LF DUPLICATE SAMPLE ID: _____

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
	Amber glass AH				
1545	VOA	8260D_DOD5 VOCs	3	40mL	HCl
1545	VOA	8011_DOD5 EDB	2	40mL	HCl
1545	Amber glass	8270 SVOCs	2	250mL	none
1545	Plastic	6010C, 6020A	1	250mL	HNO_3
1545	Plastic	6010C Fe, Mn	1	250mL	HNO_3 *filtered
1545	Plastic	353.2 Nitrite	1	50mL	none
1545	Plastic	353.2 Total N	1	250mL	Sulfuric
1545	Plastic	2320B Alkalinity	1	250mL	none
1545	Plastic	300.0 RFM Chloride, Bromide, Sulfide	1	50mL	none
		TOTAL:			

Sampler: Brian Archuleta (Printed Name) _____ (Signature)

3/10/23

PDB Deployment

Friday March 10, 2023
Weather: Cloudy, 50's, slight breeze
Personnel: Lynda Price & Brian Archuleta

Objectives Collect/download transducer data, pull transducer, collect WL, deploy 1 PDB + 4 DMs.

1115 INTERA on-site. Conduct Health + Safety meeting

1130 Download pressure transducer data, pull logger up.

1150 Arun Wahi on site

1201 Water Level = 451.97' bTOC

1215 Begin filling 4 DMs + 1 PDB w/ ASTM ~~Distilled~~ DI water provided by Eon products.

1230 Bags are connected to the dedicated tethered line and lowered down the well into the screened interval.

Top of Bag 1 (DM) is at 574' bTOC
Top of Bag 2 (DM) is at 577' bTOC
Top of Bag 3 (DM) is at 580' bTOC
Top of Bag 4 (DM) is at 593' bTOC
Top of Bag 5 (PDB) is at 586' bTOC

1305 INTERA off-site. Well is locked LP 3/10/23

Friday March 31, 2023
Weather: Sunny, 30's-60's, breezy
Personnel: Alison Hefner, Frank Rocker, Lynch Price

Objectives: Collect samples from PDBs + DMs, Collect sample using Bennett Pump. Sampling method has changed, we will be purging 3CV @ ~1 gal/min. No longer purging at a low flow rate.

0800 INTERA on-site. Tracy Vaught (KAFB) + Dylan (EA) on-site.

0810 Begin calibrating the YSI Pro Plus (Geotech Rental) and HACH Turbidity meter.

0825 Conduct H & S meeting

0830 Cetan (WUA) on site. Arun Wahi (INTERA) on-site

0902 Begin sampling the PDBs + DM bags

Water Quality Parameters: @ 0920

Temp °C	pH	SC uS/cm	ORP mV	Turb NTU	Comments
14.3	7.52	301.5	191.7	2.52	clear, no odor

See field form for more details.

Sample ID = WUABFFMW01-03312023-PDB

3/31/23 PDB-1 BP Sampling LP/NH/FR

0938 WL = 451.51' bTOC

Dylan Schmeelk 626-523-2208

0945 Begin collecting tape blank for the new silicon tape overwrap.

1000 EQPT-TAPE-03312023 collected for VOCs 8260

1015 Begin deconning the pump/tubing assembling w/ liquinox wash (culligan DI), + 2 rinses. First rinse Culligan DI, second rinse Lab grade DI from HALL.

EQPT-BLANK-03312023 collected for VOCs 8260

↳ see below

1020 Start with Culligan DI / Liquinox - Recirculating.

1040 Start recirculating Culligan DI rinse.

1054 Start recirculating Lab-grade DI water from Hall.

1115 Sampled EQPT-BLANK-03312023 collected for VOCs 8260

1120 Begin sending pump down well, deconning exterior of tubing w/ microfiber cloth + liquinox solution

AH FR/BA PDB + BP Sampling 3/31/23

1149 Generator on w/ Bennett pump downhole
DTW = 451.51' btoc

1200 Connection on flow-through cell for YSI was leaking - switched out tubing for tubing w/ wider diameter

1206 Resume pumping, can only get up to ~0.8gpm

* YSI flow-through under a lot of pressure (pulsing) → need to make splitter manifold for next event

1505 Dylan Schmeelk (EA) on-site

1515 Frank + Brian return to site.
1525 Cetan return to site

1530 A. Wahi arrive on site

Note: Current volume = 175 gallons
Parameters are stable.
Prepare to collect samples.

1537 Tracy arrive on site.

1540. Collect Samples.
EA will collect dups.
Note: we will collect VOCs first.
with Generator off. Field blank will also be collected at this point.

1545 Sample Time: WUABFFMW01_03312023_LF

3/31/23 PDB & BP Sampling AHVBA/FR

1545 Field Blank collected
FIELD-BLANK-03312023 collected for VOCs 8260

1650 Water Level = 451.50' btoc

Redeploy transducer:
1730 - Set DTW at 451.50' first readin set to start at 1800. Recording every 1 hour interval.

1745 Finish decon

note at ~1700 - Alison Hafner to FedEx to overnight ship samples to Eurofins Lab - Saturday Delivery.

1800 ~~St~~ Finish packing up site.
- Head to office to offload. (F.R.)
- B.A. to ABWVA yard to drop off trailer.

Appendix B

Laboratory Analytical Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Arun Wahi
INTERA Inc
9600 Great Hills Trail
Suite 300W
Austin, Texas 78759

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JOB DESCRIPTION

WUA Data Gap Well for KAFB BFF

JOB NUMBER

410-121085-1

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster PA 17601

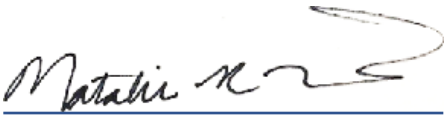
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Revision 1

Authorized for release by
Natalie Luciano, Principal Project Manager
Natalie.Luciano@et.eurofinsus.com
(717)556-7258

Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

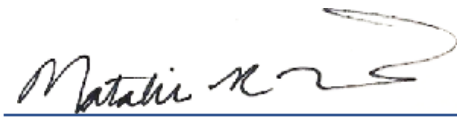

Table of Contents

Definitions/Glossary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.
cn	Refer to Case Narrative for further detail
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
M	Manual integrated compound.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
M	Manual integrated compound.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
M	Manual integrated compound.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Glossary (Continued)

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

Job ID: 410-121085-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-121085-1

REVISION

The report being provided is a revision of the original report sent on 4/26/2023. The report (revision 1) is being revised due to the resorting of analytes to report alpha-numerically.

Receipt
The samples were received on 4/1/2023 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.7°C

GC/MS VOA
Method 8260D_DOD5: The response for Dichlorodifluoromethane in the continuing calibration verification (CCV) marginally exceeds the DoD acceptance criteria on batch 410-363430. Due to the marginal nature of the outlier(s), the data is reported.

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

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

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

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

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

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

Detection Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: WUABFFMW01_03312023_PDB — Lab Sample ID: 410-121085-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trichlorobenzene	0.31	J	5.0	1.0	0.30	ug/L	1		8260D	Total/NA
Acetone	2.4	J	20	2.0	0.70	ug/L	1		8260D	Total/NA
Bis(2-ethylhexyl) phthalate	2.9	J	5.4	4.3	2.1	ug/L	1		8270E	Total/NA
Sulfate	31	D	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	9.2	D M	7.5	6.0	3.0	mg/L	5		300.0	Total/NA
Calcium	33000		200	190	96	ug/L	1		6010C	Total Recoverable
Magnesium	4500		100	80	40	ug/L	1		6010C	Total Recoverable
Potassium	2700		500	410	200	ug/L	1		6010C	Total Recoverable
Sodium	24000		1000	480	240	ug/L	1		6010C	Total Recoverable
Iron, Dissolved	190	J	210	160	82	ug/L	1		6010C	Dissolved
Manganese, Dissolved	94		10	6.2	3.1	ug/L	1		6010C	Dissolved
Arsenic	1.4	J	2.0	1.7	0.68	ug/L	1		6020A	Total Recoverable
Bicarbonate Alkalinity as CaCO3	110		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	110		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA

Client Sample ID: EQPT-PUMP_20230329 — Lab Sample ID: 410-121085-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.91	J	20	2.0	0.70	ug/L	1		8260D	Total/NA
Chloroform	0.31	J	1.0	0.60	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: EQPT-TAPE_03312023 — Lab Sample ID: 410-121085-3

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.6	J	20	2.0	0.70	ug/L	1		8260D	Total/NA

Client Sample ID: EQPT-BLANK_03312023 — Lab Sample ID: 410-121085-4

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.44	J	1.0	0.60	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: WUABFFMW01_03312023_LF — Lab Sample ID: 410-121085-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.10	J M *1	0.51	0.20	0.10	ug/L	1		8270E	Total/NA
Sulfate	28	D	7.5	5.0	2.5	mg/L	5		300.0	Total/NA
Chloride	8.9	D	7.5	6.0	3.0	mg/L	5		300.0	Total/NA
Calcium	32000		200	190	96	ug/L	1		6010C	Total Recoverable
Magnesium	4500		100	80	40	ug/L	1		6010C	Total Recoverable
Potassium	2900		500	410	200	ug/L	1		6010C	Total Recoverable
Sodium	26000		1000	480	240	ug/L	1		6010C	Total Recoverable
Iron, Dissolved	160	J	210	160	82	ug/L	1		6010C	Dissolved
Manganese, Dissolved	190		10	6.2	3.1	ug/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: WUABFFMW01_03312023_LF (Continued) — Lab Sample ID: 410-121085-5

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.98	J	2.0	1.7	0.68	ug/L	1		6020A	Total Recoverable
Bicarbonate Alkalinity as CaCO3	110		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	110		8.0	6.0	2.6	mg/L	1		2320B-2011	Total/NA

Client Sample ID: FIELD-BLANK_03312023 — Lab Sample ID: 410-121085-6

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.4	J	20	2.0	0.70	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: WUABFFMW01_03312023_PDB
Lab Sample ID: 410-121085-1
Date Collected: 03/31/23 09:02
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,2,4-Trichlorobenzene	**0.31**	**J**	5.0	1.0	0.30	ug/L		04/13/23 17:52	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 17:52	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 17:52	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 17:52	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 17:52	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 17:52	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 17:52	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 17:52	1
Acetone	**2.4**	**J**	20	2.0	0.70	ug/L		04/13/23 17:52	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 17:52	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 17:52	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 17:52	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 17:52	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 17:52	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 17:52	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 17:52	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 17:52	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 17:52	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 17:52	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 17:52	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 17:52	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 17:52	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 17:52	1

Client Sample ID: WUABFFMW01_03312023_PDB
Lab Sample ID: 410-121085-1

Date Collected: 03/31/23 09:02
Matrix: Water
Date Received: 04/01/23 09:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*04/13/23 17:52*	*1*
4-Bromofluorobenzene (Surr)	*87*		*85 - 114*		*04/13/23 17:52*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 119*		*04/13/23 17:52*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*04/13/23 17:52*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2,2'-oxybis[1-chloropropane]	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2,4,5-Trichlorophenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2,4,6-Trichlorophenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2,4-Dichlorophenol	1.1	U *1	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2,4-Dimethylphenol	9.7	U *1	11	9.7	3.2	ug/L		04/07/23 22:17	1
2,4-Dinitrophenol	30	U	32	30	15	ug/L		04/07/23 22:17	1
2,4-Dinitrotoluene	2.1	U	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
2,6-Dinitrotoluene	1.1	U M	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2-Chloronaphthalene	0.86	U	1.1	0.86	0.43	ug/L		04/07/23 22:17	1
2-Chlorophenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2-Methylnaphthalene	0.21	U *1	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
2-Methylphenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
2-Nitroaniline	2.1	U	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
2-Nitrophenol	2.1	U *1	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
3,3'-Dichlorobenzidine	8.6	U *1	11	8.6	4.3	ug/L		04/07/23 22:17	1
4,6-Dinitro-2-methylphenol	21	U	23	21	8.6	ug/L		04/07/23 22:17	1
4-Chloro-3-methylphenol	2.1	U *1	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
4-Chloroaniline	9.7	U *1	11	9.7	4.3	ug/L		04/07/23 22:17	1
4-Chlorophenyl phenyl ether	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
4-Methylphenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
4-Nitroaniline	2.1	U	3.2	2.1	0.97	ug/L		04/07/23 22:17	1
4-Nitrophenol	21	U	32	21	11	ug/L		04/07/23 22:17	1
Acenaphthene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Acenaphthylene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Acetophenone	2.1	U	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
Anthracene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Atrazine	2.1	U	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
Benzaldehyde	2.1	U	5.4	2.1	1.1	ug/L		04/07/23 22:17	1
Benzo[a]anthracene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Benzo[a]pyrene	0.24	U M	0.54	0.24	0.12	ug/L		04/07/23 22:17	1
Benzo[b]fluoranthene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Benzo[g,h,i]perylene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Benzo[k]fluoranthene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Bis(2-chloroethoxy)methane	1.1	U *1	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Bis(2-chloroethyl)ether	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Bis(2-ethylhexyl) phthalate	**2.9**	**J**	5.4	4.3	2.1	ug/L		04/07/23 22:17	1
Butyl benzyl phthalate	4.3	U *1	5.4	4.3	2.1	ug/L		04/07/23 22:17	1
Caprolactam	6.4	U	7.5	6.4	3.2	ug/L		04/07/23 22:17	1
Carbazole	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Chrysene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Dibenz(a,h)anthracene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Dibenzofuran	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1

Client Sample ID: WUABFFMW01_03312023_PDB
Lab Sample ID: 410-121085-1
Date Collected: 03/31/23 09:02
Matrix: Water
Date Received: 04/01/23 09:50

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Diethyl phthalate	4.3	U	5.4	4.3	2.1	ug/L		04/07/23 22:17	1
Dimethyl phthalate	4.3	U	5.4	4.3	2.1	ug/L		04/07/23 22:17	1
Di-n-butyl phthalate	4.3	U	5.4	4.3	2.1	ug/L		04/07/23 22:17	1
Di-n-octyl phthalate	11	U M	12	11	5.4	ug/L		04/07/23 22:17	1
Fluoranthene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Fluorene	0.26	U	0.54	0.26	0.13	ug/L		04/07/23 22:17	1
Hexachlorobenzene	0.24	U	0.54	0.24	0.12	ug/L		04/07/23 22:17	1
Hexachlorobutadiene	1.1	U *1	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Hexachlorocyclopentadiene	11	U	12	11	5.4	ug/L		04/07/23 22:17	1
Hexachloroethane	1.1	U	5.4	1.1	0.54	ug/L		04/07/23 22:17	1
Indeno[1,2,3-cd]pyrene	0.24	U	0.54	0.24	0.12	ug/L		04/07/23 22:17	1
Isophorone	1.1	U *1	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Naphthalene	0.21	U M *1	0.54	0.21	0.11	ug/L		04/07/23 22:17	1
Nitrobenzene	1.1	U *1	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
N-Nitrosodi-n-propylamine	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
N-Nitrosodiphenylamine	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Pentachlorophenol	4.3	U	5.4	4.3	1.1	ug/L		04/07/23 22:17	1
Phenanthrene	0.24	U	0.54	0.24	0.12	ug/L		04/07/23 22:17	1
Phenol	1.1	U	2.1	1.1	0.54	ug/L		04/07/23 22:17	1
Pyrene	0.21	U	0.54	0.21	0.11	ug/L		04/07/23 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*43 - 140*	*04/07/23 14:33*	*04/07/23 22:17*	*1*
2-Fluorobiphenyl (Surr)	*76*		*44 - 119*	*04/07/23 14:33*	*04/07/23 22:17*	*1*
2-Fluorophenol (Surr)	*40*		*19 - 119*	*04/07/23 14:33*	*04/07/23 22:17*	*1*
Nitrobenzene-d5 (Surr)	*65*		*44 - 120*	*04/07/23 14:33*	*04/07/23 22:17*	*1*
p-Terphenyl-d14 (Surr)	*87*		*50 - 134*	*04/07/23 14:33*	*04/07/23 22:17*	*1*
Phenol-d5 (Surr)	*26*		*10 - 120*	*04/07/23 14:33*	*04/07/23 22:17*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.028	0.019	0.0093	ug/L		04/06/23 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,2,2-Tetrachloroethane (1C)	*80*		*46 - 136*	*04/05/23 06:26*	*04/06/23 10:57*	*1*
1,1,2,2-Tetrachloroethane (2C)	*91*		*46 - 136*	*04/05/23 06:26*	*04/06/23 10:57*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.5	U	3.8	2.5	1.3	mg/L		04/24/23 14:28	5
Sulfate	**31**	**D**	7.5	5.0	2.5	mg/L		04/24/23 14:28	5
Chloride	**9.2**	**D M**	7.5	6.0	3.0	mg/L		04/24/23 14:28	5

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	**33000**		200	190	96	ug/L		04/10/23 20:18	1
Magnesium	**4500**		100	80	40	ug/L		04/10/23 20:18	1
Potassium	**2700**		500	410	200	ug/L		04/10/23 20:18	1
Sodium	**24000**		1000	480	240	ug/L		04/10/23 20:18	1

Client Sample ID: WUABFFMW01_03312023_PDB
Lab Sample ID: 410-121085-1
Date Collected: 03/31/23 09:02
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron, Dissolved	**190**	**J**	210	160	82	ug/L		04/07/23 22:03	1
Manganese, Dissolved	**94**		10	6.2	3.1	ug/L		04/07/23 22:03	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**1.4**	**J**	2.0	1.7	0.68	ug/L		04/10/23 08:19	1
Lead	0.20	U	0.50	0.20	0.071	ug/L		04/10/23 08:19	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**110**		8.0	6.0	2.6	mg/L		04/05/23 07:35	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		04/05/23 07:35	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**110**		8.0	6.0	2.6	mg/L		04/05/23 07:35	1
Nitrate as N (EPA 353.2)	0.090	U	0.10	0.090	0.040	mg/L		04/03/23 07:05	1
Nitrate Nitrite as N (EPA 353.2)	0.090	U	0.10	0.090	0.040	mg/L		04/08/23 09:10	1
Nitrite as N (EPA 353.2)	0.040	U	0.050	0.040	0.015	mg/L		04/01/23 14:47	1

Client Sample ID: EQPT-PUMP_20230329
Lab Sample ID: 410-121085-2
Date Collected: 03/29/23 15:00
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/12/23 12:22	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/12/23 12:22	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/12/23 12:22	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/12/23 12:22	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 12:22	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/12/23 12:22	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/12/23 12:22	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/12/23 12:22	1
Acetone	**0.91**	**J**	20	2.0	0.70	ug/L		04/12/23 12:22	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/12/23 12:22	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 12:22	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1

Client Sample ID: EQPT-PUMP_20230329
Lab Sample ID: 410-121085-2
Date Collected: 03/29/23 15:00
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloroform	**0.31**	**J**	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/12/23 12:22	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/12/23 12:22	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Dichlorodifluoromethane	0.50	U ^c cn	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/12/23 12:22	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/12/23 12:22	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/12/23 12:22	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 12:22	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/12/23 12:22	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 12:22	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/12/23 12:22	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 12:22	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 12:22	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/12/23 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*04/12/23 12:22*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*04/12/23 12:22*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 119*		*04/12/23 12:22*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*04/12/23 12:22*	*1*

Client Sample ID: EQPT-TAPE_03312023
Lab Sample ID: 410-121085-3
Date Collected: 03/31/23 10:00
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 18:14	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 18:14	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 18:14	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 18:14	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:14	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 18:14	1

Client Sample ID: EQPT-TAPE_03312023
Lab Sample ID: 410-121085-3

Date Collected: 03/31/23 10:00
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 18:14	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 18:14	1
Acetone	**1.6**	**J**	20	2.0	0.70	ug/L		04/13/23 18:14	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 18:14	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:14	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 18:14	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 18:14	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 18:14	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 18:14	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 18:14	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:14	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 18:14	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:14	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 18:14	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:14	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:14	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*04/13/23 18:14*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/13/23 18:14*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*04/13/23 18:14*	*1*
Toluene-d8 (Surr)	*91*		*89 - 112*		*04/13/23 18:14*	*1*

Client Sample ID: EQPT-BLANK_03312023
Lab Sample ID: 410-121085-4

Date Collected: 03/31/23 11:15
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1

Client Sample ID: EQPT-BLANK_03312023
Lab Sample ID: 410-121085-4

Date Collected: 03/31/23 11:15
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 13:27	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 13:27	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 13:27	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 13:27	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:27	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 13:27	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 13:27	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 13:27	1
Acetone	2.0	U	20	2.0	0.70	ug/L		04/13/23 13:27	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 13:27	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:27	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Chloroform	**0.44**	**J**	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 13:27	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 13:27	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 13:27	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 13:27	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 13:27	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:27	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 13:27	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:27	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 13:27	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:27	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:27	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 13:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*04/13/23 13:27*	*1*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*		*04/13/23 13:27*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*04/13/23 13:27*	*1*

Client Sample ID: EQPT-BLANK_03312023
Lab Sample ID: 410-121085-4
Date Collected: 03/31/23 11:15
Matrix: Water
Date Received: 04/01/23 09:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*103*		*89 - 112*		*04/13/23 13:27*	*1*

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 18:36	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 18:36	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 18:36	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:36	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 18:36	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 18:36	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 18:36	1
Acetone	2.0	U	20	2.0	0.70	ug/L		04/13/23 18:36	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 18:36	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:36	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 18:36	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 18:36	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 18:36	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 18:36	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 18:36	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:36	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 18:36	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 18:36	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 18:36	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 18:36	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 18:36	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*81 - 118*		*04/13/23 18:36*	*1*
4-Bromofluorobenzene (Surr)	*87*		*85 - 114*		*04/13/23 18:36*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*04/13/23 18:36*	*1*
Toluene-d8 (Surr)	*96*		*89 - 112*		*04/13/23 18:36*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2,2'-oxybis[1-chloropropane]	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2,4,5-Trichlorophenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2,4,6-Trichlorophenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2,4-Dichlorophenol	1.0	U *1	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2,4-Dimethylphenol	9.1	U *1	10	9.1	3.0	ug/L		04/07/23 22:38	1
2,4-Dinitrophenol	28	U	30	28	14	ug/L		04/07/23 22:38	1
2,4-Dinitrotoluene	2.0	U	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
2,6-Dinitrotoluene	1.0	U M	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2-Chloronaphthalene	0.81	U	1.0	0.81	0.40	ug/L		04/07/23 22:38	1
2-Chlorophenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2-Methylnaphthalene	0.20	U *1	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
2-Methylphenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
2-Nitroaniline	2.0	U	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
2-Nitrophenol	2.0	U *1	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
3,3'-Dichlorobenzidine	8.1	U *1	10	8.1	4.0	ug/L		04/07/23 22:38	1
4,6-Dinitro-2-methylphenol	20	U	21	20	8.1	ug/L		04/07/23 22:38	1
4-Chloro-3-methylphenol	2.0	U *1	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
4-Chloroaniline	9.1	U *1	10	9.1	4.0	ug/L		04/07/23 22:38	1
4-Chlorophenyl phenyl ether	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
4-Methylphenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
4-Nitroaniline	2.0	U	3.0	2.0	0.91	ug/L		04/07/23 22:38	1
4-Nitrophenol	20	U	30	20	10	ug/L		04/07/23 22:38	1
Acenaphthene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Acenaphthylene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Acetophenone	2.0	U	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
Anthracene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Atrazine	2.0	U	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
Benzaldehyde	2.0	U	5.1	2.0	1.0	ug/L		04/07/23 22:38	1
Benzo[a]anthracene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Benzo[a]pyrene	0.22	U M	0.51	0.22	0.11	ug/L		04/07/23 22:38	1
Benzo[b]fluoranthene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Benzo[g,h,i]perylene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Benzo[k]fluoranthene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5

Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	1.0	U *1	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Bis(2-chloroethyl)ether	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Bis(2-ethylhexyl) phthalate	4.0	U	5.1	4.0	2.0	ug/L		04/07/23 22:38	1
Butyl benzyl phthalate	4.0	U *1	5.1	4.0	2.0	ug/L		04/07/23 22:38	1
Caprolactam	6.1	U	7.1	6.1	3.0	ug/L		04/07/23 22:38	1
Carbazole	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Chrysene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Dibenz(a,h)anthracene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Dibenzofuran	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Diethyl phthalate	4.0	U	5.1	4.0	2.0	ug/L		04/07/23 22:38	1
Dimethyl phthalate	4.0	U	5.1	4.0	2.0	ug/L		04/07/23 22:38	1
Di-n-butyl phthalate	4.0	U	5.1	4.0	2.0	ug/L		04/07/23 22:38	1
Di-n-octyl phthalate	10	U M	11	10	5.1	ug/L		04/07/23 22:38	1
Fluoranthene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Fluorene	0.24	U	0.51	0.24	0.12	ug/L		04/07/23 22:38	1
Hexachlorobenzene	0.22	U	0.51	0.22	0.11	ug/L		04/07/23 22:38	1
Hexachlorobutadiene	1.0	U *1	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Hexachlorocyclopentadiene	10	U	11	10	5.1	ug/L		04/07/23 22:38	1
Hexachloroethane	1.0	U	5.1	1.0	0.51	ug/L		04/07/23 22:38	1
Indeno[1,2,3-cd]pyrene	0.22	U	0.51	0.22	0.11	ug/L		04/07/23 22:38	1
Isophorone	1.0	U *1	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Naphthalene	**0.10**	**J M *1**	0.51	0.20	0.10	ug/L		04/07/23 22:38	1
Nitrobenzene	1.0	U *1	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
N-Nitrosodi-n-propylamine	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
N-Nitrosodiphenylamine	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Pentachlorophenol	4.0	U	5.1	4.0	1.0	ug/L		04/07/23 22:38	1
Phenanthrene	0.22	U	0.51	0.22	0.11	ug/L		04/07/23 22:38	1
Phenol	1.0	U	2.0	1.0	0.51	ug/L		04/07/23 22:38	1
Pyrene	0.20	U	0.51	0.20	0.10	ug/L		04/07/23 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*43 - 140*	*04/07/23 14:33*	*04/07/23 22:38*	*1*
2-Fluorobiphenyl (Surr)	*64*		*44 - 119*	*04/07/23 14:33*	*04/07/23 22:38*	*1*
2-Fluorophenol (Surr)	*29*		*19 - 119*	*04/07/23 14:33*	*04/07/23 22:38*	*1*
Nitrobenzene-d5 (Surr)	*56*		*44 - 120*	*04/07/23 14:33*	*04/07/23 22:38*	*1*
p-Terphenyl-d14 (Surr)	*87*		*50 - 134*	*04/07/23 14:33*	*04/07/23 22:38*	*1*
Phenol-d5 (Surr)	*20*		*10 - 120*	*04/07/23 14:33*	*04/07/23 22:38*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.019	U	0.029	0.019	0.0096	ug/L		04/06/23 11:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,2,2-Tetrachloroethane (1C)	*86*		*46 - 136*	*04/05/23 06:26*	*04/06/23 11:14*	*1*
1,1,2,2-Tetrachloroethane (2C)	*91*		*46 - 136*	*04/05/23 06:26*	*04/06/23 11:14*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	2.5	U	3.8	2.5	1.3	mg/L		04/24/23 14:32	5
Sulfate	**28**	**D**	7.5	5.0	2.5	mg/L		04/24/23 14:32	5

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

Method: EPA 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloride	**8.9**	**D**	7.5	6.0	3.0	mg/L		04/24/23 14:32	5

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	**32000**		200	190	96	ug/L		04/10/23 20:05	1
Magnesium	**4500**		100	80	40	ug/L		04/10/23 20:05	1
Potassium	**2900**		500	410	200	ug/L		04/10/23 20:05	1
Sodium	**26000**		1000	480	240	ug/L		04/10/23 20:05	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron, Dissolved	**160**	**J**	210	160	82	ug/L		04/07/23 10:00	1
Manganese, Dissolved	**190**		10	6.2	3.1	ug/L		04/07/23 10:00	1

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	**0.98**	**J**	2.0	1.7	0.68	ug/L		04/10/23 08:11	1
Lead	0.20	U	0.50	0.20	0.071	ug/L		04/10/23 08:11	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B-2011)	**110**		8.0	6.0	2.6	mg/L		04/05/23 07:28	1
Carbonate Alkalinity as CaCO3 (SM 2320B-2011)	6.0	U	8.0	6.0	2.6	mg/L		04/05/23 07:28	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B-2011)	**110**		8.0	6.0	2.6	mg/L		04/05/23 07:28	1
Nitrate as N (EPA 353.2)	0.090	U	0.10	0.090	0.040	mg/L		04/03/23 07:05	1
Nitrate Nitrite as N (EPA 353.2)	0.090	U	0.10	0.090	0.040	mg/L		04/08/23 09:12	1
Nitrite as N (EPA 353.2)	0.040	U	0.050	0.040	0.015	mg/L		04/01/23 14:47	1

Client Sample ID: FIELD-BLANK_03312023
Lab Sample ID: 410-121085-6
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 13:49	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 13:49	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 13:49	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 13:49	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:49	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 13:49	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 13:49	1

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: FIELD-BLANK_03312023
Lab Sample ID: 410-121085-6
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

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

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 13:49	1
Acetone	**1.4**	**J**	20	2.0	0.70	ug/L		04/13/23 13:49	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 13:49	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:49	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 13:49	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 13:49	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 13:49	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 13:49	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 13:49	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:49	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 13:49	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 13:49	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 13:49	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 13:49	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 13:49	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*81 - 118*		*04/13/23 13:49*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*04/13/23 13:49*	*1*
Dibromofluoromethane (Surr)	*94*		*80 - 119*		*04/13/23 13:49*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*04/13/23 13:49*	*1*

Surrogate Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Method: 8260D - 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)
410-121085-1	WUABFFMW01_03312023_PDI	105	87	95	98
410-121085-2	EQPT-PUMP_20230329	103	92	93	101
410-121085-3	EQPT-TAPE_03312023	107	94	94	91
410-121085-4	EQPT-BLANK_03312023	108	94	98	103
410-121085-5	WUABFFMW01_03312023_LF	99	87	94	96
410-121085-6	FIELD-BLANK_03312023	104	92	94	99
LCS 410-363430/4	Lab Control Sample	101	96	92	102
LCS 410-363895/4	Lab Control Sample	100	97	90	100
MB 410-363430/6	Method Blank	105	93	94	99
MB 410-363895/6	Method Blank	105	96	91	104

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	TPHd14	PHL
Lab Sample ID	Client Sample ID	(43-140)	(44-119)	(19-119)	(44-120)	(50-134)	(10-120)
410-121085-1	WUABFFMW01_03312023_PDI	70	76	40	65	87	26
410-121085-5	WUABFFMW01_03312023_LF	68	64	29	56	87	20
LCS 410-362150/2-A	Lab Control Sample	87	91	54	79	98	36
LCSD 410-362150/3-A	Lab Control Sample Dup	79	74	47	57	84	32
MB 410-362150/1-A	Method Blank	89	86	40	71	96	27

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1122TCA1	1122TCA2
Lab Sample ID	Client Sample ID	(46-136)	(46-136)
410-121085-1	WUABFFMW01_03312023_PDI	80	91
410-121085-5	WUABFFMW01_03312023_LF	86	91
LCS 410-360964/2-A	Lab Control Sample	82	80
LCSD 410-360964/3-A	Lab Control Sample Dup	89	83
MB 410-360964/1-A	Method Blank	96	88

Surrogate Legend

1122TCA = 1,1,2,2-Tetrachloroethane

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

Lab Sample ID: MB 410-363430/6
Matrix: Water
Analysis Batch: 363430

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/12/23 10:22	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/12/23 10:22	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/12/23 10:22	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/12/23 10:22	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 10:22	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/12/23 10:22	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/12/23 10:22	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/12/23 10:22	1
Acetone	2.0	U	20	2.0	0.70	ug/L		04/12/23 10:22	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/12/23 10:22	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 10:22	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/12/23 10:22	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/12/23 10:22	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/12/23 10:22	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/12/23 10:22	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/12/23 10:22	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 10:22	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/12/23 10:22	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/12/23 10:22	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/12/23 10:22	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/12/23 10:22	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/12/23 10:22	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/12/23 10:22	1

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

Lab Sample ID: MB 410-363430/6
Matrix: Water
Analysis Batch: 363430

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		04/12/23 10:22	1
4-Bromofluorobenzene (Surr)	93		85 - 114		04/12/23 10:22	1
Dibromofluoromethane (Surr)	94		80 - 119		04/12/23 10:22	1
Toluene-d8 (Surr)	99		89 - 112		04/12/23 10:22	1

Lab Sample ID: LCS 410-363430/4
Matrix: Water
Analysis Batch: 363430

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-Trichloroethane	20.0	16.5		ug/L		82	74 - 131
1,1,2,2-Tetrachloroethane	20.0	21.3		ug/L		107	71 - 121
1,1,2-Trichloroethane	20.0	19.9		ug/L		100	80 - 119
1,1-Dichloroethane	20.0	19.0		ug/L		95	77 - 125
1,1-Dichloroethene	20.0	20.3		ug/L		102	71 - 131
1,2,4-Trichlorobenzene	20.0	18.8		ug/L		94	69 - 130
1,2-Dibromo-3-Chloropropane	20.0	16.2		ug/L		81	62 - 128
1,2-Dibromoethane (EDB)	20.0	19.2		ug/L		96	77 - 121
1,2-Dichlorobenzene	20.0	19.1		ug/L		96	80 - 119
1,2-Dichloroethane	20.0	16.3		ug/L		82	73 - 128
1,2-Dichloropropane	20.0	20.7		ug/L		103	78 - 122
1,3-Dichlorobenzene	20.0	19.4		ug/L		97	80 - 119
1,4-Dichlorobenzene	20.0	20.7		ug/L		104	79 - 118
2-Butanone	250	252		ug/L		101	56 - 143
2-Hexanone	250	253		ug/L		101	57 - 139
4-Methyl-2-pentanone	250	243		ug/L		97	67 - 130
Acetone	250	243		ug/L		97	39 - 160
Benzene	20.0	20.4		ug/L		102	79 - 120
Bromodichloromethane	20.0	17.5		ug/L		87	79 - 125
Bromoform	20.0	16.5		ug/L		83	66 - 130
Bromomethane	20.0	17.1		ug/L		86	53 - 141
Carbon disulfide	20.0	21.0		ug/L		105	64 - 133
Carbon tetrachloride	20.0	15.6		ug/L		78	72 - 136
Chlorobenzene	20.0	19.2		ug/L		96	82 - 118
Chloroethane	20.0	18.8		ug/L		94	60 - 138
Chloroform	20.0	17.7		ug/L		88	79 - 124
Chloromethane	20.0	20.8		ug/L		104	50 - 139
cis-1,2-Dichloroethene	20.0	19.7		ug/L		98	78 - 123
cis-1,3-Dichloropropene	20.0	18.0		ug/L		90	75 - 124
Cyclohexane	20.0	18.7		ug/L		93	71 - 130
Dibromochloromethane	20.0	17.3		ug/L		86	74 - 126
Dichlorodifluoromethane	20.0	14.7		ug/L		73	32 - 152
Ethylbenzene	20.0	19.5		ug/L		98	79 - 121
Freon 113	20.0	18.2		ug/L		91	70 - 136
Isopropylbenzene	20.0	19.2		ug/L		96	72 - 131
Methyl acetate	20.0	22.0		ug/L		110	56 - 136
Methyl tert-butyl ether	20.0	17.7		ug/L		88	71 - 124
Methylcyclohexane	20.0	17.9		ug/L		90	72 - 132

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

Lab Sample ID: LCS 410-363430/4
Matrix: Water
Analysis Batch: 363430

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	20.0	20.6		ug/L		103	74 - 124
Styrene	20.0	19.4		ug/L		97	78 - 123
Tetrachloroethene	20.0	18.5		ug/L		93	74 - 129
Toluene	20.0	20.0		ug/L		100	80 - 121
trans-1,2-Dichloroethene	20.0	19.4		ug/L		97	75 - 124
trans-1,3-Dichloropropene	20.0	18.3		ug/L		91	73 - 127
Trichloroethene	20.0	18.4		ug/L		92	79 - 123
Trichlorofluoromethane	20.0	13.5		ug/L		67	65 - 141
Vinyl chloride	20.0	19.5		ug/L		97	58 - 137
Xylenes, Total	60.0	59.4		ug/L		99	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*
Dibromofluoromethane (Surr)	*92*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Lab Sample ID: MB 410-363895/6
Matrix: Water
Analysis Batch: 363895

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,1,2,2-Tetrachloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,1,2-Trichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,1-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,1-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,2,4-Trichlorobenzene	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 11:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	5.0	1.0	0.30	ug/L		04/13/23 11:05	1
1,2-Dibromoethane (EDB)	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
1,2-Dichlorobenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 11:05	1
1,2-Dichloroethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,2-Dichloropropane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
1,3-Dichlorobenzene	1.4	U	5.0	1.4	0.68	ug/L		04/13/23 11:05	1
1,4-Dichlorobenzene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 11:05	1
2-Butanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 11:05	1
2-Hexanone	1.7	U	10	1.7	0.85	ug/L		04/13/23 11:05	1
4-Methyl-2-pentanone	1.0	U	10	1.0	0.50	ug/L		04/13/23 11:05	1
Acetone	2.0	U	20	2.0	0.70	ug/L		04/13/23 11:05	1
Benzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Bromodichloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Bromoform	2.0	U	4.0	2.0	1.0	ug/L		04/13/23 11:05	1
Bromomethane	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Carbon disulfide	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 11:05	1
Carbon tetrachloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Chlorobenzene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Chloroethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Chloroform	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1

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

Lab Sample ID: MB 410-363895/6
Matrix: Water
Analysis Batch: 363895

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Chloromethane	1.1	U	2.0	1.1	0.55	ug/L		04/13/23 11:05	1
cis-1,2-Dichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
cis-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Cyclohexane	2.0	U	5.0	2.0	1.0	ug/L		04/13/23 11:05	1
Dibromochloromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Dichlorodifluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Ethylbenzene	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 11:05	1
Freon 113	0.60	U	10	0.60	0.30	ug/L		04/13/23 11:05	1
Isopropylbenzene	0.50	U	5.0	0.50	0.20	ug/L		04/13/23 11:05	1
Methyl acetate	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 11:05	1
Methyl tert-butyl ether	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Methylcyclohexane	1.0	U	5.0	1.0	0.50	ug/L		04/13/23 11:05	1
Methylene Chloride	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Styrene	0.60	U	5.0	0.60	0.30	ug/L		04/13/23 11:05	1
Tetrachloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Toluene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
trans-1,2-Dichloroethene	1.4	U	2.0	1.4	0.70	ug/L		04/13/23 11:05	1
trans-1,3-Dichloropropene	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Trichloroethene	0.60	U	1.0	0.60	0.30	ug/L		04/13/23 11:05	1
Trichlorofluoromethane	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Vinyl chloride	0.50	U	1.0	0.50	0.20	ug/L		04/13/23 11:05	1
Xylenes, Total	0.80	U	1.0	0.80	0.40	ug/L		04/13/23 11:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*04/13/23 11:05*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*04/13/23 11:05*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 119*		*04/13/23 11:05*	*1*
Toluene-d8 (Surr)	*104*		*89 - 112*		*04/13/23 11:05*	*1*

Lab Sample ID: LCS 410-363895/4
Matrix: Water
Analysis Batch: 363895

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-Trichloroethane	20.0	17.5		ug/L		87	74 - 131
1,1,2,2-Tetrachloroethane	20.0	23.2		ug/L		116	71 - 121
1,1,2-Trichloroethane	20.0	20.7		ug/L		104	80 - 119
1,1-Dichloroethane	20.0	19.9		ug/L		100	77 - 125
1,1-Dichloroethene	20.0	20.5		ug/L		102	71 - 131
1,2,4-Trichlorobenzene	20.0	19.7		ug/L		99	69 - 130
1,2-Dibromo-3-Chloropropane	20.0	17.0		ug/L		85	62 - 128
1,2-Dibromoethane (EDB)	20.0	19.2		ug/L		96	77 - 121
1,2-Dichlorobenzene	20.0	20.0		ug/L		100	80 - 119
1,2-Dichloroethane	20.0	17.2		ug/L		86	73 - 128
1,2-Dichloropropane	20.0	22.0		ug/L		110	78 - 122
1,3-Dichlorobenzene	20.0	20.2		ug/L		101	80 - 119
1,4-Dichlorobenzene	20.0	21.7		ug/L		109	79 - 118
2-Butanone	250	270		ug/L		108	56 - 143

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

Lab Sample ID: LCS 410-363895/4
Matrix: Water
Analysis Batch: 363895

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Hexanone	250	247		ug/L		99	57 - 139
4-Methyl-2-pentanone	250	253		ug/L		101	67 - 130
Acetone	250	233		ug/L		93	39 - 160
Benzene	20.0	21.4		ug/L		107	79 - 120
Bromodichloromethane	20.0	19.1		ug/L		95	79 - 125
Bromoform	20.0	16.7		ug/L		84	66 - 130
Bromomethane	20.0	17.8		ug/L		89	53 - 141
Carbon disulfide	20.0	21.3		ug/L		107	64 - 133
Carbon tetrachloride	20.0	16.2		ug/L		81	72 - 136
Chlorobenzene	20.0	19.9		ug/L		99	82 - 118
Chloroethane	20.0	19.2		ug/L		96	60 - 138
Chloroform	20.0	18.5		ug/L		92	79 - 124
Chloromethane	20.0	19.3		ug/L		97	50 - 139
cis-1,2-Dichloroethene	20.0	20.7		ug/L		103	78 - 123
cis-1,3-Dichloropropene	20.0	19.1		ug/L		96	75 - 124
Cyclohexane	20.0	19.7		ug/L		98	71 - 130
Dibromochloromethane	20.0	17.3		ug/L		86	74 - 126
Dichlorodifluoromethane	20.0	12.2		ug/L		61	32 - 152
Ethylbenzene	20.0	20.7		ug/L		104	79 - 121
Freon 113	20.0	17.8		ug/L		89	70 - 136
Isopropylbenzene	20.0	20.5		ug/L		102	72 - 131
Methyl acetate	20.0	21.1		ug/L		106	56 - 136
Methyl tert-butyl ether	20.0	19.1		ug/L		95	71 - 124
Methylcyclohexane	20.0	19.3		ug/L		96	72 - 132
Methylene Chloride	20.0	21.1		ug/L		106	74 - 124
Styrene	20.0	20.4		ug/L		102	78 - 123
Tetrachloroethene	20.0	18.3		ug/L		91	74 - 129
Toluene	20.0	20.7		ug/L		104	80 - 121
trans-1,2-Dichloroethene	20.0	20.3		ug/L		101	75 - 124
trans-1,3-Dichloropropene	20.0	19.1		ug/L		95	73 - 127
Trichloroethene	20.0	19.8		ug/L		99	79 - 123
Trichlorofluoromethane	20.0	13.7	M	ug/L		69	65 - 141
Vinyl chloride	20.0	18.1		ug/L		90	58 - 137
Xylenes, Total	60.0	60.4		ug/L		101	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*90*		*80 - 119*
Toluene-d8 (Surr)	*100*		*89 - 112*

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-362150/1-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 362150

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1'-Biphenyl	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-362150/1-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 362150

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2,4,5-Trichlorophenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2,4,6-Trichlorophenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2,4-Dichlorophenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2,4-Dimethylphenol	9.0	U	10	9.0	3.0	ug/L		04/07/23 19:27	1
2,4-Dinitrophenol	28	U	30	28	14	ug/L		04/07/23 19:27	1
2,4-Dinitrotoluene	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
2,6-Dinitrotoluene	1.0	U M	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2-Chloronaphthalene	0.80	U	1.0	0.80	0.40	ug/L		04/07/23 19:27	1
2-Chlorophenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2-Methylnaphthalene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
2-Methylphenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
2-Nitroaniline	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
2-Nitrophenol	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
3,3'-Dichlorobenzidine	8.0	U	10	8.0	4.0	ug/L		04/07/23 19:27	1
4,6-Dinitro-2-methylphenol	20	U	21	20	8.0	ug/L		04/07/23 19:27	1
4-Chloro-3-methylphenol	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
4-Chloroaniline	9.0	U	10	9.0	4.0	ug/L		04/07/23 19:27	1
4-Chlorophenyl phenyl ether	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
4-Methylphenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
4-Nitroaniline	2.0	U	3.0	2.0	0.90	ug/L		04/07/23 19:27	1
4-Nitrophenol	20	U	30	20	10	ug/L		04/07/23 19:27	1
Acenaphthene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Acenaphthylene	0.204	J M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Acetophenone	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
Anthracene	0.20	U M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Atrazine	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
Benzaldehyde	2.0	U	5.0	2.0	1.0	ug/L		04/07/23 19:27	1
Benzo[a]anthracene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Benzo[a]pyrene	0.22	U M	0.50	0.22	0.11	ug/L		04/07/23 19:27	1
Benzo[b]fluoranthene	0.20	U M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Benzo[g,h,i]perylene	0.20	U M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Benzo[k]fluoranthene	0.20	U M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Bis(2-chloroethoxy)methane	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Bis(2-chloroethyl)ether	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Bis(2-ethylhexyl) phthalate	4.0	U	5.0	4.0	2.0	ug/L		04/07/23 19:27	1
Butyl benzyl phthalate	4.0	U	5.0	4.0	2.0	ug/L		04/07/23 19:27	1
Caprolactam	6.0	U	7.0	6.0	3.0	ug/L		04/07/23 19:27	1
Carbazole	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Chrysene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Dibenz(a,h)anthracene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Dibenzofuran	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Diethyl phthalate	4.0	U	5.0	4.0	2.0	ug/L		04/07/23 19:27	1
Dimethyl phthalate	4.0	U	5.0	4.0	2.0	ug/L		04/07/23 19:27	1
Di-n-butyl phthalate	4.0	U	5.0	4.0	2.0	ug/L		04/07/23 19:27	1
Di-n-octyl phthalate	10	U M	11	10	5.0	ug/L		04/07/23 19:27	1
Fluoranthene	0.167	J	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Fluorene	0.24	U	0.50	0.24	0.12	ug/L		04/07/23 19:27	1
Hexachlorobenzene	0.22	U	0.50	0.22	0.11	ug/L		04/07/23 19:27	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 410-362150/1-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 362150

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Hexachlorobutadiene	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Hexachlorocyclopentadiene	10	U	11	10	5.0	ug/L		04/07/23 19:27	1
Hexachloroethane	1.0	U	5.0	1.0	0.50	ug/L		04/07/23 19:27	1
Indeno[1,2,3-cd]pyrene	0.22	U	0.50	0.22	0.11	ug/L		04/07/23 19:27	1
Isophorone	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Naphthalene	0.20	U	0.50	0.20	0.10	ug/L		04/07/23 19:27	1
Nitrobenzene	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
N-Nitrosodi-n-propylamine	1.0	U M	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
N-Nitrosodiphenylamine	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Pentachlorophenol	4.0	U	5.0	4.0	1.0	ug/L		04/07/23 19:27	1
Phenanthrene	0.178	J	0.50	0.22	0.11	ug/L		04/07/23 19:27	1
Phenol	1.0	U	2.0	1.0	0.50	ug/L		04/07/23 19:27	1
Pyrene	0.150	J M	0.50	0.20	0.10	ug/L		04/07/23 19:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*43 - 140*	*04/07/23 14:33*	*04/07/23 19:27*	*1*
2-Fluorobiphenyl (Surr)	*86*		*44 - 119*	*04/07/23 14:33*	*04/07/23 19:27*	*1*
2-Fluorophenol (Surr)	*40*		*19 - 119*	*04/07/23 14:33*	*04/07/23 19:27*	*1*
Nitrobenzene-d5 (Surr)	*71*		*44 - 120*	*04/07/23 14:33*	*04/07/23 19:27*	*1*
p-Terphenyl-d14 (Surr)	*96*		*50 - 134*	*04/07/23 14:33*	*04/07/23 19:27*	*1*
Phenol-d5 (Surr)	*27*		*10 - 120*	*04/07/23 14:33*	*04/07/23 19:27*	*1*

Lab Sample ID: LCS 410-362150/2-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 362150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1'-Biphenyl	50.0	51.1		ug/L		102	49 - 115
2,2'-oxybis[1-chloropropane]	50.0	47.3		ug/L		95	37 - 130
2,4,5-Trichlorophenol	50.0	54.0		ug/L		108	53 - 123
2,4,6-Trichlorophenol	50.0	51.7		ug/L		103	50 - 125
2,4-Dichlorophenol	50.0	50.7		ug/L		101	47 - 121
2,4-Dimethylphenol	50.0	49.8		ug/L		100	31 - 124
2,4-Dinitrophenol	100	97.8		ug/L		98	23 - 143
2,4-Dinitrotoluene	50.0	51.7		ug/L		103	57 - 128
2,6-Dinitrotoluene	50.0	55.3		ug/L		111	57 - 124
2-Chloronaphthalene	50.0	49.9		ug/L		100	40 - 116
2-Chlorophenol	50.0	46.6		ug/L		93	38 - 117
2-Methylnaphthalene	50.0	48.5		ug/L		97	40 - 121
2-Methylphenol	50.0	42.3		ug/L		85	30 - 117
2-Nitroaniline	50.0	53.3		ug/L		107	55 - 127
2-Nitrophenol	50.0	47.3		ug/L		95	47 - 123
3,3'-Dichlorobenzidine	100	88.2		ug/L		88	27 - 129
4,6-Dinitro-2-methylphenol	100	112		ug/L		112	44 - 137
4-Chloro-3-methylphenol	50.0	44.0		ug/L		88	52 - 119
4-Chloroaniline	50.0	42.1		ug/L		84	33 - 117
4-Chlorophenyl phenyl ether	50.0	49.9		ug/L		100	53 - 121
4-Methylphenol	50.0	39.7		ug/L		79	25 - 120

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-362150/2-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 362150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Nitroaniline	50.0	45.7		ug/L		91	55 - 126
4-Nitrophenol	100	53.8		ug/L		54	17 - 120
Acenaphthene	50.0	53.6		ug/L		107	47 - 122
Acenaphthylene	50.0	52.1		ug/L		104	41 - 130
Acetophenone	50.0	48.8		ug/L		98	46 - 118
Anthracene	50.0	51.8		ug/L		104	57 - 123
Atrazine	50.0	44.0		ug/L		88	44 - 142
Benzaldehyde	50.0	43.3		ug/L		87	36 - 120
Benzo[a]anthracene	50.0	53.8		ug/L		108	58 - 125
Benzo[a]pyrene	50.0	55.0		ug/L		110	54 - 128
Benzo[b]fluoranthene	50.0	53.2		ug/L		106	53 - 131
Benzo[g,h,i]perylene	50.0	57.7		ug/L		115	50 - 134
Benzo[k]fluoranthene	50.0	55.4		ug/L		111	57 - 129
Bis(2-chloroethoxy)methane	50.0	48.2		ug/L		96	48 - 120
Bis(2-chloroethyl)ether	50.0	47.6		ug/L		95	43 - 118
Bis(2-ethylhexyl) phthalate	50.0	51.1		ug/L		102	55 - 135
Butyl benzyl phthalate	50.0	52.4		ug/L		105	53 - 134
Caprolactam	50.0	9.02		ug/L		18	12 - 40
Carbazole	50.0	55.2		ug/L		110	60 - 122
Chrysene	50.0	52.1		ug/L		104	59 - 123
Dibenz(a,h)anthracene	50.0	56.9		ug/L		114	51 - 134
Dibenzofuran	50.0	51.8		ug/L		104	53 - 118
Diethyl phthalate	50.0	49.3		ug/L		99	56 - 125
Dimethyl phthalate	50.0	46.7		ug/L		93	45 - 127
Di-n-butyl phthalate	50.0	51.0		ug/L		102	59 - 127
Di-n-octyl phthalate	50.0	47.7		ug/L		95	51 - 140
Fluoranthene	50.0	52.9		ug/L		106	57 - 128
Fluorene	50.0	49.7		ug/L		99	52 - 124
Hexachlorobenzene	50.0	51.9		ug/L		104	53 - 125
Hexachlorobutadiene	50.0	45.1		ug/L		90	22 - 124
Hexachlorocyclopentadiene	50.0	40.4		ug/L		81	10 - 82
Hexachloroethane	50.0	41.9		ug/L		84	21 - 115
Indeno[1,2,3-cd]pyrene	50.0	59.6		ug/L		119	52 - 134
Isophorone	50.0	47.1		ug/L		94	42 - 124
Naphthalene	50.0	49.2		ug/L		98	40 - 121
Nitrobenzene	50.0	42.7		ug/L		85	45 - 121
N-Nitrosodi-n-propylamine	50.0	45.0		ug/L		90	49 - 119
N-Nitrosodiphenylamine	42.5	45.2		ug/L		106	51 - 123
Pentachlorophenol	100	104		ug/L		104	35 - 138
Phenanthrene	50.0	52.2		ug/L		104	59 - 120
Phenol	50.0	21.6		ug/L		43	22 - 69
Pyrene	50.0	51.7		ug/L		103	57 - 126

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*87*		*43 - 140*
2-Fluorobiphenyl (Surr)	*91*		*44 - 119*
2-Fluorophenol (Surr)	*54*		*19 - 119*
Nitrobenzene-d5 (Surr)	*79*		*44 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 410-362150/2-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 362150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl-d14 (Surr)	*98*		*50 - 134*
Phenol-d5 (Surr)	*36*		*10 - 120*

Lab Sample ID: LCSD 410-362150/3-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 362150

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1'-Biphenyl			50.0	46.1		ug/L		92	49 - 115	10	20
2,2'-oxybis[1-chloropropane]			50.0	39.3		ug/L		79	37 - 130	19	20
2,4,5-Trichlorophenol			50.0	48.2		ug/L		96	53 - 123	11	20
2,4,6-Trichlorophenol			50.0	45.1		ug/L		90	50 - 125	14	20
2,4-Dichlorophenol			50.0	36.9	*1	ug/L		74	47 - 121	31	20
2,4-Dimethylphenol			50.0	35.3	*1	ug/L		71	31 - 124	34	20
2,4-Dinitrophenol			100	87.0		ug/L		87	23 - 143	12	20
2,4-Dinitrotoluene			50.0	47.5		ug/L		95	57 - 128	9	20
2,6-Dinitrotoluene			50.0	49.2		ug/L		98	57 - 124	12	20
2-Chloronaphthalene			50.0	45.7		ug/L		91	40 - 116	9	20
2-Chlorophenol			50.0	38.3		ug/L		77	38 - 117	19	20
2-Methylnaphthalene			50.0	36.7	*1	ug/L		73	40 - 121	28	20
2-Methylphenol			50.0	35.4		ug/L		71	30 - 117	18	20
2-Nitroaniline			50.0	46.0		ug/L		92	55 - 127	15	20
2-Nitrophenol			50.0	36.4	*1	ug/L		73	47 - 123	26	20
3,3'-Dichlorobenzidine			100	62.2	*1	ug/L		62	27 - 129	34	20
4,6-Dinitro-2-methylphenol			100	105		ug/L		105	44 - 137	6	20
4-Chloro-3-methylphenol			50.0	33.8	*1	ug/L		68	52 - 119	26	20
4-Chloroaniline			50.0	26.4	*1	ug/L		53	33 - 117	46	20
4-Chlorophenyl phenyl ether			50.0	46.3		ug/L		93	53 - 121	8	20
4-Methylphenol			50.0	33.3		ug/L		67	25 - 120	17	20
4-Nitroaniline			50.0	42.1		ug/L		84	55 - 126	8	30
4-Nitrophenol			100	50.1		ug/L		50	17 - 120	7	30
Acenaphthene			50.0	44.3		ug/L		89	47 - 122	19	20
Acenaphthylene			50.0	44.6		ug/L		89	41 - 130	16	20
Acetophenone			50.0	39.8		ug/L		80	46 - 118	20	20
Anthracene			50.0	49.0		ug/L		98	57 - 123	6	20
Atrazine			50.0	42.6		ug/L		85	44 - 142	3	20
Benzaldehyde			50.0	36.8		ug/L		74	36 - 120	16	30
Benzo[a]anthracene			50.0	44.9		ug/L		90	58 - 125	18	20
Benzo[a]pyrene			50.0	49.2		ug/L		98	54 - 128	11	20
Benzo[b]fluoranthene			50.0	46.9		ug/L		94	53 - 131	13	20
Benzo[g,h,i]perylene			50.0	48.5		ug/L		97	50 - 134	17	20
Benzo[k]fluoranthene			50.0	48.5		ug/L		97	57 - 129	13	20
Bis(2-chloroethoxy)methane			50.0	34.1	*1	ug/L		68	48 - 120	34	20
Bis(2-chloroethyl)ether			50.0	39.8		ug/L		80	43 - 118	18	20
Bis(2-ethylhexyl) phthalate			50.0	44.2		ug/L		88	55 - 135	15	20
Butyl benzyl phthalate			50.0	40.9	*1	ug/L		82	53 - 134	25	20
Caprolactam			50.0	7.81		ug/L		16	12 - 40	14	30
Carbazole			50.0	47.7		ug/L		95	60 - 122	15	20

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 410-362150/3-A
Matrix: Water
Analysis Batch: 362206

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 362150

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chrysene	50.0	46.8		ug/L		94	59 - 123	11	20
Dibenz(a,h)anthracene	50.0	50.7		ug/L		101	51 - 134	11	20
Dibenzofuran	50.0	45.2		ug/L		90	53 - 118	13	20
Diethyl phthalate	50.0	45.6		ug/L		91	56 - 125	8	20
Dimethyl phthalate	50.0	39.1		ug/L		78	45 - 127	18	20
Di-n-butyl phthalate	50.0	46.4		ug/L		93	59 - 127	9	20
Di-n-octyl phthalate	50.0	41.7		ug/L		83	51 - 140	13	20
Fluoranthene	50.0	50.1		ug/L		100	57 - 128	6	20
Fluorene	50.0	45.5		ug/L		91	52 - 124	9	20
Hexachlorobenzene	50.0	45.5		ug/L		91	53 - 125	13	20
Hexachlorobutadiene	50.0	34.3	*1	ug/L		69	22 - 124	27	20
Hexachlorocyclopentadiene	50.0	29.9		ug/L		60	10 - 82	30	30
Hexachloroethane	50.0	37.1		ug/L		74	21 - 115	12	20
Indeno[1,2,3-cd]pyrene	50.0	50.0		ug/L		100	52 - 134	18	20
Isophorone	50.0	35.2	*1	ug/L		70	42 - 124	29	20
Naphthalene	50.0	35.3	*1	ug/L		71	40 - 121	33	20
Nitrobenzene	50.0	33.7	*1	ug/L		67	45 - 121	23	20
N-Nitrosodi-n-propylamine	50.0	37.0		ug/L		74	49 - 119	20	20
N-Nitrosodiphenylamine	42.5	42.2		ug/L		99	51 - 123	7	20
Pentachlorophenol	100	104		ug/L		104	35 - 138	0	20
Phenanthrene	50.0	49.0		ug/L		98	59 - 120	6	20
Phenol	50.0	19.0		ug/L		38	22 - 69	13	30
Pyrene	50.0	48.6		ug/L		97	57 - 126	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*79*		*43 - 140*
2-Fluorobiphenyl (Surr)	*74*		*44 - 119*
2-Fluorophenol (Surr)	*47*		*19 - 119*
Nitrobenzene-d5 (Surr)	*57*		*44 - 120*
p-Terphenyl-d14 (Surr)	*84*		*50 - 134*
Phenol-d5 (Surr)	*32*		*10 - 120*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 410-360964/1-A
Matrix: Water
Analysis Batch: 361152

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 360964

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Ethylene Dibromide (1C)	0.020	U	0.030	0.020	0.010	ug/L		04/05/23 17:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,2,2-Tetrachloroethane (1C)	*96*		*46 - 136*	*04/05/23 06:26*	*04/05/23 17:25*	*1*
1,1,2,2-Tetrachloroethane (2C)	*88*		*46 - 136*	*04/05/23 06:26*	*04/05/23 17:25*	*1*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 410-360964/2-A
Matrix: Water
Analysis Batch: 361152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 360964

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ethylene Dibromide (1C)			0.128	0.0885		ug/L		69	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,2,2-Tetrachloroethane (1C)	*82*		*46 - 136*
1,1,2,2-Tetrachloroethane (2C)	*80*		*46 - 136*

Lab Sample ID: LCSD 410-360964/3-A
Matrix: Water
Analysis Batch: 361152

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 360964

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylene Dibromide (1C)			0.128	0.0977		ug/L		76	60 - 140	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,1,2,2-Tetrachloroethane (1C)	*89*		*46 - 136*
1,1,2,2-Tetrachloroethane (2C)	*83*		*46 - 136*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 410-367913/5
Matrix: Water
Analysis Batch: 367913

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.50	U	0.75	0.50	0.25	mg/L		04/24/23 12:37	1
Sulfate	1.0	U	1.5	1.0	0.50	mg/L		04/24/23 12:37	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		04/24/23 12:37	1

Lab Sample ID: LCS 410-367913/3
Matrix: Water
Analysis Batch: 367913

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Bromide			7.50	7.14		mg/L		95	91 - 110		
Sulfate			7.50	7.17		mg/L		96	87 - 112		
Chloride			3.00	2.92		mg/L		97	87 - 111		

Lab Sample ID: LCSD 410-367913/4
Matrix: Water
Analysis Batch: 367913

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide			7.50	7.21		mg/L		96	91 - 110	1	15
Sulfate			7.50	7.27		mg/L		97	87 - 112	1	15
Chloride			3.00	2.98		mg/L		99	87 - 111	2	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 410-367937/5
Matrix: Water
Analysis Batch: 367937

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Bromide	0.50	U	0.75	0.50	0.25	mg/L		04/24/23 11:21	1
Sulfate	1.0	U	1.5	1.0	0.50	mg/L		04/24/23 11:21	1
Chloride	1.2	U	1.5	1.2	0.60	mg/L		04/24/23 11:21	1

Lab Sample ID: LCS 410-367937/3
Matrix: Water
Analysis Batch: 367937

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	7.50	7.69		mg/L		102	91 - 110
Sulfate	7.50	7.73		mg/L		103	87 - 112
Chloride	3.00	3.09	M	mg/L		103	87 - 111

Lab Sample ID: LCSD 410-367937/4
Matrix: Water
Analysis Batch: 367937

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	7.50	7.66		mg/L		102	91 - 110	0	15
Sulfate	7.50	7.67		mg/L		102	87 - 112	1	15
Chloride	3.00	3.08	M	mg/L		103	87 - 111	0	15

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 410-361600/1-A
Matrix: Water
Analysis Batch: 362042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361600

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron, Dissolved	160	U	210	160	82	ug/L		04/07/23 09:23	1
Manganese, Dissolved	6.2	U	10	6.2	3.1	ug/L		04/07/23 09:23	1

Lab Sample ID: LCS 410-361600/2-A
Matrix: Water
Analysis Batch: 362042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron, Dissolved	5000	4870		ug/L		97	87 - 115
Manganese, Dissolved	500	524		ug/L		105	90 - 114

Lab Sample ID: MB 410-361602/1-A
Matrix: Water
Analysis Batch: 362412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 361602

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Iron, Dissolved	160	U	210	160	82	ug/L		04/07/23 20:51	1
Manganese, Dissolved	6.2	U	10	6.2	3.1	ug/L		04/07/23 20:51	1

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

Lab Sample ID: LCS 410-361602/2-A
Matrix: Water
Analysis Batch: 362412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 361602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron, Dissolved	5000	4970		ug/L		99	87 - 115
Manganese, Dissolved	500	516		ug/L		103	90 - 114

Lab Sample ID: MB 410-361883/1-A
Matrix: Water
Analysis Batch: 362871

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 361883

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	190	U	200	190	96	ug/L		04/10/23 19:44	1
Magnesium	80	U	100	80	40	ug/L		04/10/23 19:44	1
Potassium	410	U	500	410	200	ug/L		04/10/23 19:44	1
Sodium	480	U	1000	480	240	ug/L		04/10/23 19:44	1

Lab Sample ID: LCS 410-361883/2-A
Matrix: Water
Analysis Batch: 362871

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 361883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	5000	5040		ug/L		101	87 - 113
Magnesium	5000	5130		ug/L		103	85 - 113
Potassium	5000	5050		ug/L		101	86 - 114
Sodium	5000	5160		ug/L		103	87 - 115

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 410-361883/1-A
Matrix: Water
Analysis Batch: 362619

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 361883

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Arsenic	1.7	U	2.0	1.7	0.68	ug/L		04/10/23 07:41	1
Lead	0.20	U	0.50	0.20	0.071	ug/L		04/10/23 07:41	1

Lab Sample ID: LCS 410-361883/2-A
Matrix: Water
Analysis Batch: 362619

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 361883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	513		ug/L		103	84 - 116
Lead	50.0	52.7		ug/L		105	88 - 115

Method: 2320B-2011 - Alkalinity, Total

Lab Sample ID: MB 410-361089/132
Matrix: Water
Analysis Batch: 361089

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	6.0	U	8.0	6.0	2.6	mg/L		04/05/23 06:14	1

Method: 2320B-2011 - Alkalinity, Total (Continued)

Lab Sample ID: LCS 410-361089/134
Matrix: Water
Analysis Batch: 361089

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	189	181		mg/L		96	66 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 410-359923/13
Matrix: Water
Analysis Batch: 359923

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrite as N	0.040	U	0.050	0.040	0.015	mg/L		04/01/23 14:46	1

Lab Sample ID: LCS 410-359923/14
Matrix: Water
Analysis Batch: 359923

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	0.699	0.710		mg/L		101	90 - 110

Lab Sample ID: LCSD 410-359923/15
Matrix: Water
Analysis Batch: 359923

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	0.699	0.687		mg/L		98	90 - 110	3	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 410-362377/21
Matrix: Water
Analysis Batch: 362377

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

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate Nitrite as N	0.090	U	0.10	0.090	0.040	mg/L		04/08/23 08:26	1

Lab Sample ID: LCS 410-362377/19
Matrix: Water
Analysis Batch: 362377

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	2.50	2.35		mg/L		94	90 - 110

Lab Sample ID: LCSD 410-362377/20
Matrix: Water
Analysis Batch: 362377

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	2.50	2.43		mg/L		97	90 - 110	4	20

GC/MS VOA

Analysis Batch: 363430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-2	EQPT-PUMP_20230329	Total/NA	Water	8260D	
MB 410-363430/6	Method Blank	Total/NA	Water	8260D	
LCS 410-363430/4	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 363895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	8260D	
410-121085-3	EQPT-TAPE_03312023	Total/NA	Water	8260D	
410-121085-4	EQPT-BLANK_03312023	Total/NA	Water	8260D	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	8260D	
410-121085-6	FIELD-BLANK_03312023	Total/NA	Water	8260D	
MB 410-363895/6	Method Blank	Total/NA	Water	8260D	
LCS 410-363895/4	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 362150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	3510C	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	3510C	
MB 410-362150/1-A	Method Blank	Total/NA	Water	3510C	
LCS 410-362150/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 410-362150/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 362206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	8270E	362150
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	8270E	362150
MB 410-362150/1-A	Method Blank	Total/NA	Water	8270E	362150
LCS 410-362150/2-A	Lab Control Sample	Total/NA	Water	8270E	362150
LCSD 410-362150/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	362150

GC Semi VOA

Prep Batch: 360964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	8011	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	8011	
MB 410-360964/1-A	Method Blank	Total/NA	Water	8011	
LCS 410-360964/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 410-360964/3-A	Lab Control Sample Dup	Total/NA	Water	8011	

Analysis Batch: 361152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-360964/1-A	Method Blank	Total/NA	Water	8011	360964
LCS 410-360964/2-A	Lab Control Sample	Total/NA	Water	8011	360964
LCSD 410-360964/3-A	Lab Control Sample Dup	Total/NA	Water	8011	360964

Analysis Batch: 361529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	8011	360964
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	8011	360964

HPLC/IC

Analysis Batch: 367913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	300.0	
MB 410-367913/5	Method Blank	Total/NA	Water	300.0	
LCS 410-367913/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-367913/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 367937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	300.0	
MB 410-367937/5	Method Blank	Total/NA	Water	300.0	
LCS 410-367937/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 410-367937/4	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 361600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-5	WUABFFMW01_03312023_LF	Dissolved	Water	Non-Digest Prep	
MB 410-361600/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-361600/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 361602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Dissolved	Water	Non-Digest Prep	
MB 410-361602/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-361602/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 361883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total Recoverable	Water	3005A	
410-121085-5	WUABFFMW01_03312023_LF	Total Recoverable	Water	3005A	
MB 410-361883/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-361883/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 362042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-5	WUABFFMW01_03312023_LF	Dissolved	Water	6010C	361600
MB 410-361600/1-A	Method Blank	Total/NA	Water	6010C	361600
LCS 410-361600/2-A	Lab Control Sample	Total/NA	Water	6010C	361600

Analysis Batch: 362412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Dissolved	Water	6010C	361602
MB 410-361602/1-A	Method Blank	Total/NA	Water	6010C	361602
LCS 410-361602/2-A	Lab Control Sample	Total/NA	Water	6010C	361602

Analysis Batch: 362619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total Recoverable	Water	6020A	361883
410-121085-5	WUABFFMW01_03312023_LF	Total Recoverable	Water	6020A	361883
MB 410-361883/1-A	Method Blank	Total Recoverable	Water	6020A	361883
LCS 410-361883/2-A	Lab Control Sample	Total Recoverable	Water	6020A	361883

QC Association Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Metals

Analysis Batch: 362871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total Recoverable	Water	6010C	361883
410-121085-5	WUABFFMW01_03312023_LF	Total Recoverable	Water	6010C	361883
MB 410-361883/1-A	Method Blank	Total Recoverable	Water	6010C	361883
LCS 410-361883/2-A	Lab Control Sample	Total Recoverable	Water	6010C	361883

General Chemistry

Analysis Batch: 359923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	353.2	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	353.2	
MB 410-359923/13	Method Blank	Total/NA	Water	353.2	
LCS 410-359923/14	Lab Control Sample	Total/NA	Water	353.2	
LCSD 410-359923/15	Lab Control Sample Dup	Total/NA	Water	353.2	

Analysis Batch: 360069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	353.2	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	353.2	

Analysis Batch: 361089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	2320B-2011	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	2320B-2011	
MB 410-361089/132	Method Blank	Total/NA	Water	2320B-2011	
LCS 410-361089/134	Lab Control Sample	Total/NA	Water	2320B-2011	

Analysis Batch: 362377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-121085-1	WUABFFMW01_03312023_PDB	Total/NA	Water	353.2	
410-121085-5	WUABFFMW01_03312023_LF	Total/NA	Water	353.2	
MB 410-362377/21	Method Blank	Total/NA	Water	353.2	
LCS 410-362377/19	Lab Control Sample	Total/NA	Water	353.2	
LCSD 410-362377/20	Lab Control Sample Dup	Total/NA	Water	353.2	

Lab Chronicle

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: WUABFFMW01_03312023_PDB
Lab Sample ID: 410-121085-1
Date Collected: 03/31/23 09:02
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363895	TQ4J	ELLE	04/13/23 17:52
Total/NA	Prep	3510C			362150	QJZ6	ELLE	04/07/23 14:33
Total/NA	Analysis	8270E		1	362206	SJ89	ELLE	04/07/23 22:17
Total/NA	Prep	8011			360964	UMAD	ELLE	04/05/23 06:26
Total/NA	Analysis	8011		1	361529	JC94	ELLE	04/06/23 10:57
Total/NA	Analysis	300.0		5	367937	L4QM	ELLE	04/24/23 14:28
Dissolved	Prep	Non-Digest Prep			361602	HUH3	ELLE	04/06/23 11:03
Dissolved	Analysis	6010C		1	362412	MT26	ELLE	04/07/23 22:03
Total Recoverable	Prep	3005A			361883	UAMX	ELLE	04/07/23 04:43
Total Recoverable	Analysis	6010C		1	362871	MT26	ELLE	04/10/23 20:18
Total Recoverable	Prep	3005A			361883	UAMX	ELLE	04/07/23 04:43
Total Recoverable	Analysis	6020A		1	362619	F7JF	ELLE	04/10/23 08:19
Total/NA	Analysis	2320B-2011		1	361089	DI9Q	ELLE	04/05/23 07:35
Total/NA	Analysis	353.2		1	362377	Q3HN	ELLE	04/08/23 09:10
Total/NA	Analysis	353.2		1	359923	Q3HN	ELLE	04/01/23 14:47
Total/NA	Analysis	353.2		1	360069	UKJF	ELLE	04/03/23 07:05

Client Sample ID: EQPT-PUMP_20230329
Lab Sample ID: 410-121085-2
Date Collected: 03/29/23 15:00
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363430	UKAD	ELLE	04/12/23 12:22

Client Sample ID: EQPT-TAPE_03312023
Lab Sample ID: 410-121085-3
Date Collected: 03/31/23 10:00
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363895	TQ4J	ELLE	04/13/23 18:14

Client Sample ID: EQPT-BLANK_03312023
Lab Sample ID: 410-121085-4
Date Collected: 03/31/23 11:15
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363895	TQ4J	ELLE	04/13/23 13:27

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363895	TQ4J	ELLE	04/13/23 18:36

Lab Chronicle

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Client Sample ID: WUABFFMW01_03312023_LF
Lab Sample ID: 410-121085-5
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			362150	QJZ6	ELLE	04/07/23 14:33
Total/NA	Analysis	8270E		1	362206	SJ89	ELLE	04/07/23 22:38
Total/NA	Prep	8011			360964	UMAD	ELLE	04/05/23 06:26
Total/NA	Analysis	8011		1	361529	JC94	ELLE	04/06/23 11:14
Total/NA	Analysis	300.0		5	367913	L4QM	ELLE	04/24/23 14:32
Dissolved	Prep	Non-Digest Prep			361600	HUH3	ELLE	04/06/23 10:59
Dissolved	Analysis	6010C		1	362042	MT26	ELLE	04/07/23 10:00
Total Recoverable	Prep	3005A			361883	UAMX	ELLE	04/07/23 04:43
Total Recoverable	Analysis	6010C		1	362871	MT26	ELLE	04/10/23 20:05
Total Recoverable	Prep	3005A			361883	UAMX	ELLE	04/07/23 04:43
Total Recoverable	Analysis	6020A		1	362619	F7JF	ELLE	04/10/23 08:11
Total/NA	Analysis	2320B-2011		1	361089	DI9Q	ELLE	04/05/23 07:28
Total/NA	Analysis	353.2		1	362377	Q3HN	ELLE	04/08/23 09:12
Total/NA	Analysis	353.2		1	359923	Q3HN	ELLE	04/01/23 14:47
Total/NA	Analysis	353.2		1	360069	UKJF	ELLE	04/03/23 07:05

Client Sample ID: FIELD-BLANK_03312023
Lab Sample ID: 410-121085-6
Date Collected: 03/31/23 15:45
Matrix: Water
Date Received: 04/01/23 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	363895	TQ4J	ELLE	04/13/23 13:49

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

Accreditation/Certification Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
353.2		Water	Nitrate Nitrite as N
6010C	3005A	Water	Calcium
6010C	3005A	Water	Magnesium
6010C	3005A	Water	Potassium
6010C	3005A	Water	Sodium
6010C	Non-Digest Prep	Water	Iron, Dissolved
6010C	Non-Digest Prep	Water	Manganese, Dissolved
6020A	3005A	Water	Arsenic
6020A	3005A	Water	Lead

Method Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds (GC/MS)	SW846	ELLE
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	ELLE
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	ELLE
300.0	Anions, Ion Chromatography	EPA	ELLE
6010C	Metals (ICP)	SW846	ELLE
6020A	Metals (ICP/MS)	SW846	ELLE
2320B-2011	Alkalinity, Total	SM	ELLE
353.2	Nitrate by Calculation	EPA	ELLE
353.2	Nitrogen, Nitrate-Nitrite	EPA	ELLE
353.2	Nitrogen, Nitrite	EPA	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE
8011	Microextraction	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

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:

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

Sample Summary

Client: INTERA Inc
Job ID: 410-121085-1
Project/Site: WUA Data Gap Well for KAFB BFF

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-121085-1	WUABFFMW01_03312023_PDB	Water	03/31/23 09:02	04/01/23 09:50
410-121085-2	EQPT-PUMP_20230329	Water	03/29/23 15:00	04/01/23 09:50
410-121085-3	EQPT-TAPE_03312023	Water	03/31/23 10:00	04/01/23 09:50
410-121085-4	EQPT-BLANK_03312023	Water	03/31/23 11:15	04/01/23 09:50
410-121085-5	WUABFFMW01_03312023_LF	Water	03/31/23 15:45	04/01/23 09:50
410-121085-6	FIELD-BLANK_03312023	Water	03/31/23 15:45	04/01/23 09:50

Eurofins Lancaster Laboratories Environme
2425 New Holland Pike
Lancaster, PA 17601
Phone: 717-656-2300 Fax: 717-656-2681

Chain of Custody Record

410-121085 Chain of Custody

eurofins | Environment Testing

Client Information	Sampler: L. Price / A. Hafner	Lab PM: Barnhart, Amanda	COC No: 410-84275-23364.1
Client Contact: Lynda Price	Phone:	E-Mail: Amanda.Barnhart@et.eurofinsus.com	Page: Page 1 of 2
Company: INTERA Inc	PWSID:	Analysis Requested	Job #:
Address: 6000 Uptown Blvd NE Ste 220	Due Date Requested:		Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
City: Albuquerque	TAT Requested (days):		
State, Zip: NM, 87110	Compliance Project: Δ Yes Δ No		
Phone: 505-246-1600(Tel)	PO #: ABWUA.C009.KAFB		
Email: lprice@intera.com	WO #:		Other:
Project Name: WUA Data Gap Well for KAFB BFF	Project #: 41014469		
Site:	SSOW#:		

Sample Identification	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)	8260D_DOD5 - TCL 4.3 VOCs	8270E_DOD5 - TCL 4.3 SVOCs	6010C_DOD5, 6020A_DOD5	6010C_DOD5 - Dissolved Metals - Fe, Mn Field Filtered	8011_DOD5 - Ethylene Dibromide	2320B - Alkalinity - bicarbonate, carbonate, tot	300_ORFM_28D_D5 - Chloride, Bromide, Sulfate	353.2_Nitrite - Nitrite	353.2_Pres - Nitrogen, Total Nitrate & Nitrite	Nitrate_Calc - Nitrate				Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	D	D	A	N	N	N	S	N					
WUABFFMW01_03312023_PDB	03/31/23	0902	G	W			X	X	X	X	X	X	X	X	X	X					
EQPT-PUMP-20230329	03/29/23	1500	G	Aq			X														
EQPT-TAPE-03312023	03/31/23	1000	G	Aq			X														
EQPT-BLANK-03312023	03/31/23	1115	G	Aq			X														
WUABFFMW01_03312023_LF	03/31/23	1545	G	Aq			X	X	X	X	X	X	X	X	X	X					
FIELD-BLANK-03312023	03/31/23	1545	G	Aq			X														

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Allison Hafner INTERA	3/31/23 1645	INTERA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				4/1/23 9:50	EUET

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		0.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: INTERA Inc

Job Number: 410-121085-1

Login Number: 121085
List Number: 1
Creator: McBeth, Jessica

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

Appendix C

Waste Manifest

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
V S Q G	1	800-861-1700	13788 - 12

GENERATOR

5. Generator's Name and Mailing Address — Att: Diane Agnew
Albuquerque Bernalillo County Water Utility Authority
1 Civic Plaza NW
Albuquerque NM 87103
Generator's Phone: 505 289-3008

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Advanced Environmental Solutions, Inc. — U.S. EPA ID Number: NMR000006502

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
Advanced Environmental Solutions, Inc.
2318 Roldan Drive
Belen NM 87002
Facility's Phone: 505 861-1700
U.S. EPA ID Number: NMR000006502

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	Non RCRA Regulated, Non DOT Hazardous Water	001	TP	200 ~~275~~ ~~55~~	G	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1)(L) AES Profile # AES1005
1x275g Poly TOTE
NON-HAZ
9.1) A10088
JOB# J13788

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Doug Roshan for ABCWUA — Signature: [signature] — Month: 4 Day: 3 Year: 23

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Pedro Gutierrez — Signature: Pedro E — Month: 4 Day: 3 Year: 23

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: JOHN J SANCHEZ — Signature: John J Sanchez — Month: 4 Day: 3 Year: 23